



City Multi

Energy Efficient VRF Systems

The City Multi range



Solutions for more demanding applications

Efficient &

The City Multi range is Mitsubishi Electric's answer to large scale VRF (Variable Refrigerant Flow) applications. The efficiency of City Multi is second to none and offers a substantial increase in energy efficiency, with corresponding EER/COP ratings.

The City Multi Y Series range offers a simple and flexible solution where there is a demand for a changeover capability between heating and cooling, helping to ensure a constant, comfortable indoor climate.

Mitsubishi Electric also has the ability to provide simultaneous heating and cooling through its R2 and WR2 systems. The difference here being that this is achieved through only two pipes rather than the conventional three. By using Mitsubishi Electric's 2-pipe heat recovery technology, substantial savings can again be made on annual running costs. With a wide range of 76 indoor units, up to 50 (depending on the capacity available) can be connected to a YHM outdoor unit.

Broadening the range of potential City Multi applications is Mitsubishi Electric's 3rd generation water cooled R410A WR2 system. This system not only produces heat recovery from the refrigerant circuit but also via its water circuit, offering double heat recovery potential.

Sophisticated technology, combined with a high level of control and energy efficiency:

City Multi is perfectly positioned to meet the demands of today's market.





flexible

The Strength of City Multi

The R410A YHM-A series offers some of the highest EER/COP ratings in the market.



The Basics



What is VRF?

VRF stands for Variable Refrigerant Flow. A VRF air conditioning system modulates the flow of refrigerant depending upon the capacity requirements of the building. A VRF system comprises of a condensing unit sited externally and a series of multiple indoor units to provide cooling and/or heating to the occupied space.

Our answer to VRF

Mitsubishi Electric sets the boundaries of VRF technology with the City Multi range, which is available using R410A refrigerant with zero ODP (Ozone Depletion Potential). The range has been specifically designed for today's building requirements and addresses key market issues such as energy efficiency, adaptability and reliability. Mitsubishi Electric manufactures the only 2-pipe heat recovery simultaneous heating and cooling system in the world and equally unique, a water-cooled version. With user friendly control systems utilising Internet technology and integrated cooling and ventilation indoor units, City Multi is the benchmark and market leader in VRF technology.



What is inverter driven technology?

Mitsubishi Electric spends more than 5% of its turnover on research and development, with our engineers always looking at ways in which we can improve and lead in air conditioning efficiency. The use of inverter technology in our City Multi systems is paramount in this process, working by varying the compressor speed to match the cooling or heating load, thereby consuming only the power necessary to match the exact requirement of the room. When City Multi is operating at partial load, the energy efficiency of the system is significantly higher than at full load. In a typical application partial load conditions prevail for more than 90% of operation time. A fixed speed system can only operate at 100% capacity and cannot match the annual efficiencies of an inverter system.

What is a Heat Pump system?

Mitsubishi Electric's City Multi Y Series, is a heat pump system, which provides either heating or cooling to a building at any given time.

What is a Heat Recovery system?

Mitsubishi Electric's City Multi R2 and WR2 series' have the ability to provide heating and cooling at the same time in areas connected to the same outdoor unit.

Why R410A?

R410A is a more efficient refrigerant as it has a higher specific heat capacity when compared to R407c or R22. This higher energy carrying capacity allows for smaller pipe sizes, longer pipe runs and reduces the volume of refrigerant within a system.

This is a major factor when complying with EN378, a European standard concerning safety and environmental requirements in the design, manufacture, installation, operation, maintenance and disposal of refrigerating systems.



Why Heat Recovery?

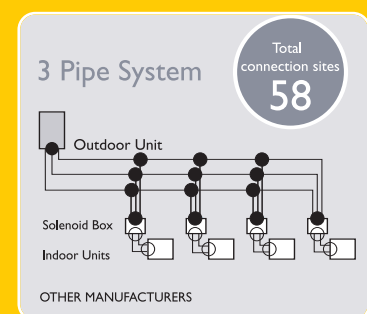
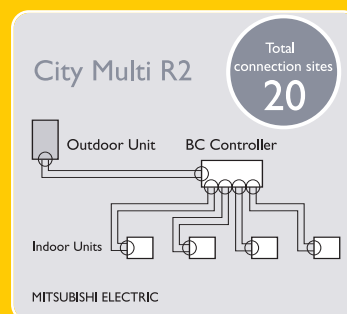
Flexibility and efficiency are key factors when selecting a heat recovery system. For example, while a heat pump system is adequate for a large open plan office, businesses that have a more partitioned structure to an office will require the need to simultaneously heat or cool different sections of the office according to each user's individual preferences.

The efficiency of this type of system comes from the ability to use the by-products of cooling and heating to transfer energy where it is required, thus acting as a balanced heat exchanger achieving up to 20% cost savings over a conventional heat pump system.

The number of connection sites needed for a R2 / WR2 system are also significantly lower than those needed for a three pipe version. This helps to reduce installation costs, further increasing the savings associated with City Multi.

Comparison example of piping connection sites

○ = 2 sites ● = 3 sites

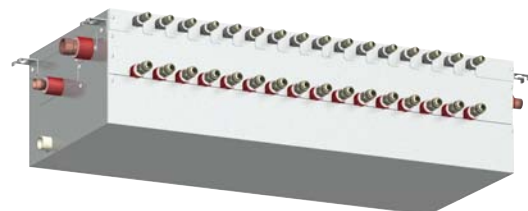


How does the R2 / WR2 Heat Recovery System operate on 2 Pipe's?

The secret of City Multi heat recovery systems lies in the

BC Controller

The BC Controller houses a liquid/gas separator, allowing the outdoor unit to deliver a mixture (2 phase) of hot gas for heating and liquid for cooling, all through the same pipe. Three pipe systems allocate a pipe to each of these phases. When this mixture arrives at the BC Controller, it is separated and the correct phase delivered to each indoor unit depending on the individual requirement of either heating or cooling.



The technology to make City Multi the natural choice

Energy efficiency has always been the driver for City Multi technological development. Technology that always delivers the quality and reliability needed for commercial air conditioning environments. Mitsubishi Electric spend more than 5% of their turnover on research and development, with our engineers always looking at ways in which we can improve and lead in air conditioning efficiency.

City Multi R410A YHM-A technology

Using the very latest in **IPM (Intelligent Power Module)** technology, precise control of energy input is achieved allowing City Multi to further improve COPs for R410A systems. IPM uses 1Hz steps of capacity control, matching building requirements through more accurate control of the occupied space with reduced power input.

As in previous versions, IPM technology operates extremely effectively under part load conditions (50-80% of operating capacity), a condition that most systems will be in for their normal working life. Therefore the consideration of efficiency at part load is accounted for as well as when at peak load conditions, offering high system efficiency all year round.

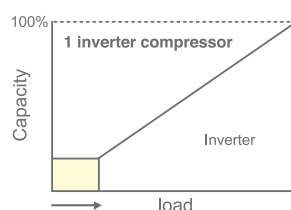


Stable and smooth operation - 100% inverter control

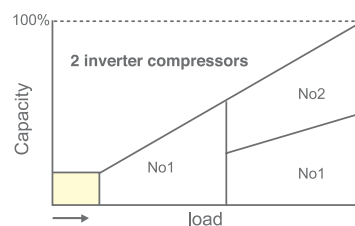
All City Multi compressors are inverter-driven - Capable of precisely matching a building's cooling and heating demands.

The outdoor unit combinations comprise of one module for 8-18hp systems (for R2 up to 16hp), two modules for 20-36hp systems (for R2, 18-32hp) and three modules for 38-50hp systems (Y series only). Each module carries one inverter compressor making simple and highly reliable control possible. Not only does it allow low starting currents, the inverter driven compressor also provides precise indoor comfort and adapts to the air conditioning load, achieving smooth transition across the range of compressor frequencies.

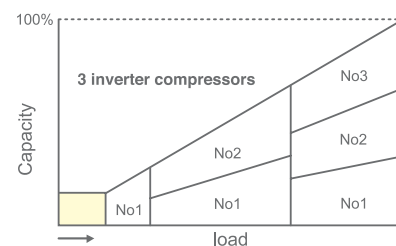
Y Series 8-18hp / R2 8-16hp



Y Series 20-36hp / R2 18-32hp



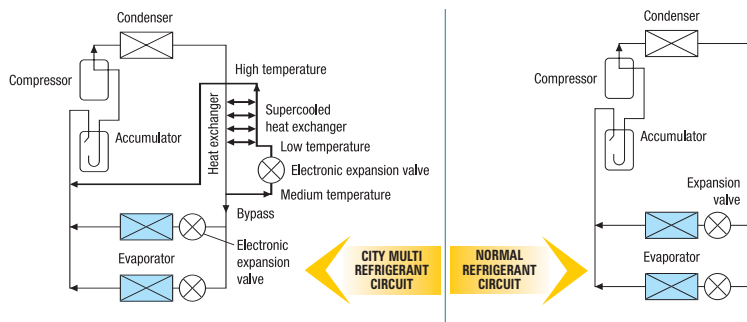
Y Series 38-50hp



Heat Interchange Circuit

To further enhance the class leading efficiency of City Multi, the unique Heat Interchange Circuit provides extra sub cooling. This system allows optimum refrigerant distribution to multiple indoor units, by allowing more effective use of refrigerant flowing through the electronic expansion valves.

Because of the added efficiency, volumes of refrigerant in systems are continuing to reduce.



The difference between YHM-A and previous Mitsubishi Electric models

Technology is key when increased efficiency is demanded. The City Multi YHM-A range is designed to deliver this.

A highly efficient R410A scroll compressor design results in less friction losses at the motor. A simplified refrigerant circuit (low pressure loss) including new accumulator design also adds a few more points to the efficiency scale.

Enhancements to the heat interchange circuit, inverter driven fan motor and heat exchanger design, again add vital increases to overall system efficiency and COPs.

Total Energy Conservation

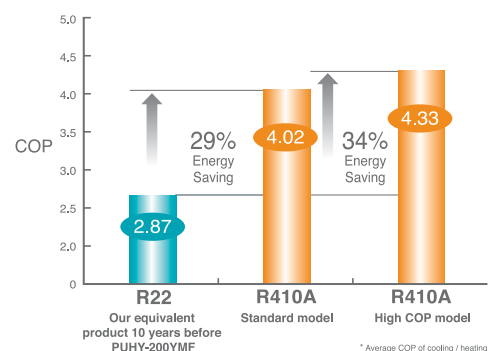
The importance of COP

COP stands for "Co-efficient of Performance". It is a measure of the useful energy a system can deliver compared to the energy that it consumes. It is calculated by dividing the energy output by the energy input of a system. The higher the figure then the more efficient the system is deemed to be, with commensurate reduced running costs.

For Heat Pumps to be included on the Energy Technology Product List under the Enhanced Capital Allowance scheme, they must achieve a heating COP of 3.4 and a cooling EER (energy efficiency ratio) of 3.0. Therefore every input of 1kW of energy must deliver an output of 3.4kW for heating and 3.0kW for cooling, achieving an energy label of B.

Total Energy Conservation

Comparison of COP (energy efficiency) of an 8hp YHM-A system.



Ground Source Heat Pumps

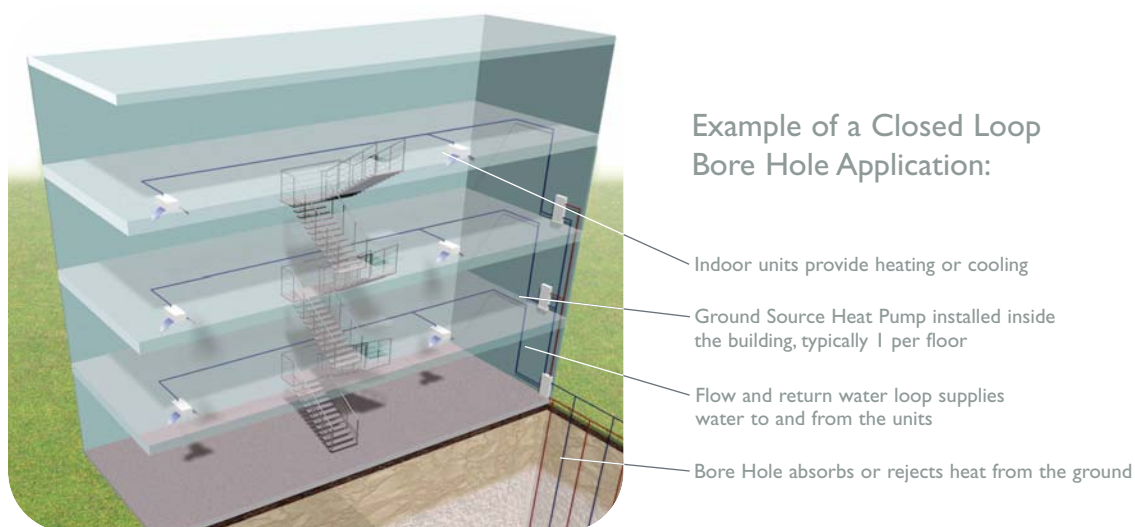
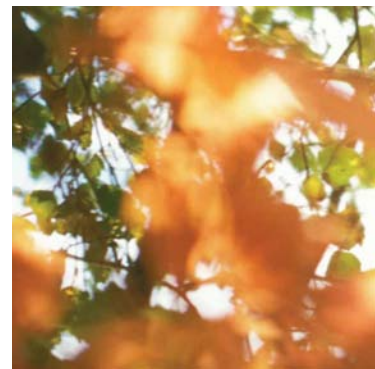
A very efficient source of energy for water source heat pump systems is the Earth itself. Ground source heat pumps use the Earth's natural solar collection and heat storage capabilities as an infinite heat source/heat sink.

At between 1.7m and 3m below the ground, the temperature changes from 17°C in the summer to 10°C in the winter. Deeper down however, the temperature of the ground is a constant 10°C all year round. It is these relatively constant, dependable temperatures that can be harnessed using ground source heat pumps.

The constant ground temperatures allow the heat pump to operate at optimum efficiency in both heating and cooling, as the high summer or low winter temperatures do not influence performance. Heat is extracted or rejected into the ground using water which is pumped through a network of plastic pipes.

There are two standard ground source methods available, **Open Loop** and **Closed Loop** (Bore Hole or Slinky):

- **Open Loop** - Large bodies of water can be utilised as a stable source of water at a relatively constant temperature. This can be either surface water or ground water. Surface water would include lakes, reservoirs, rivers and the sea.
- **Closed Loop Slinky** - A trench is dug to a depth of between 1.7 to 3m and plastic spiral pipe is laid into the bottom. The pipe is covered with sand to provide good ground to pipe contact and then the trench is backfilled with the excavated soil.
- **Closed Loop Bore Hole** - A series of holes are drilled down into the ground at a depth of 50 to 130m, depending on geothermal conditions. Two water pipes connected via a 'u bend' are fed directly into these holes and then surrounded by a conductive grout.





Highly efficient & extremely flexible

New **Acoustic Kits** for PUHY and PURY Series units

A range of Acoustic Kits designed for noise reduction.
An industry first, the kits offer a 6dBA noise level
reduction from standard.

For supply and / or installation please contact
Ambient Acoustics on 01934 712802



Features and

High off coil / High sensible cooling

Poor design or application of air conditioning systems can sometimes lead to cold draughts and uneven room temperatures. Low off coil temperatures cause dehumidifying of the air which can create dry eyes and sore throats.

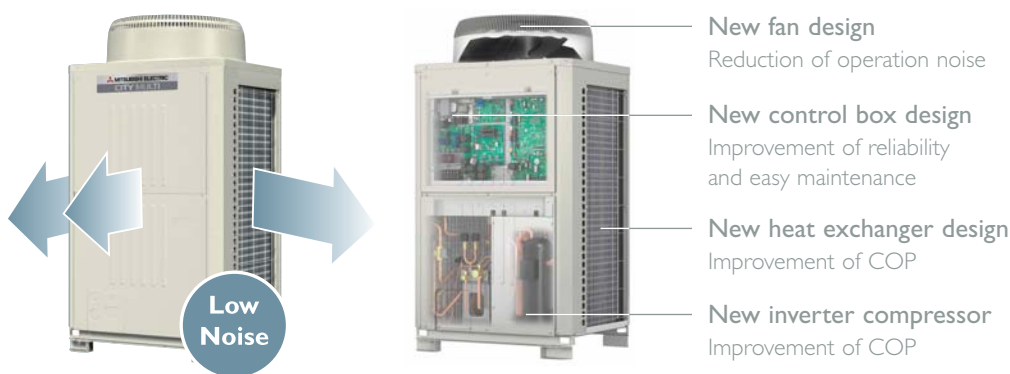
Mitsubishi Electric now provides a **High Sensible Cooling Function** specifically designed to deal with this. By raising the off coil temperature, a 10% increase in sensible cooling capacity over standard operation is achievable, the result being greater comfort for occupants. These high SHF's are available throughout the range of indoor units, allowing optimum selection of units tailored to more specific design criteria.

Reduced noise levels

New fan design

City Multi VRF systems led the introduction of larger single fan rotors some ten years ago, achieving substantially lower noise levels over multiple designs. Continuing the development in the areas of blade shape and weight, Mitsubishi Electric have managed to achieve even higher performance and lower noise levels.

To reduce noise levels further and comply with inner city residential noise regulations, all outdoor units include Night Set-back mode. This function works by lowering the fan speed and compressor frequency proportionally with reduction in demand (44dBA for PUHY-P250YHM-A). The compressor compartment is also now sealed, further reducing noise levels.



Benefits

Fine Control of the Inverter Provides Better Efficiency and Performance

Air cooled inverters use the ambient temperature to cool the inverter. For water cooled VRF (which are installed inside the building) refrigerant cooling is used to maintain accurate control of the Inverter.

Refrigerant volume checking function

This function runs the system, measuring various temperatures and pressures throughout the system, comparing these to the values stored in the units memory from the previous service. If a leakage has occurred the system will indicate so, enabling customers to easily comply with the F-Gas regulation.



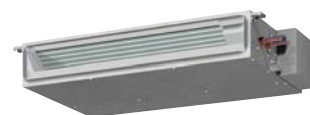
Replace technology

This unique function allows the re-use of refrigerant piping, controllers, power and control wiring for all previously installed Mitsubishi Electric R22 and R407c Heat Recovery and Cooling only systems and partial replace of Heat Pumps (pressure regulations require one pipe from the outdoor to the first branch to be replaced). This function offers unprecedented savings on installation costs, disruption to business and down time, not to mention the considerable running cost and CO2 emission savings - more than halving the running costs compared to a 10 year old unit.



Cooling operation set temperature of 14°C

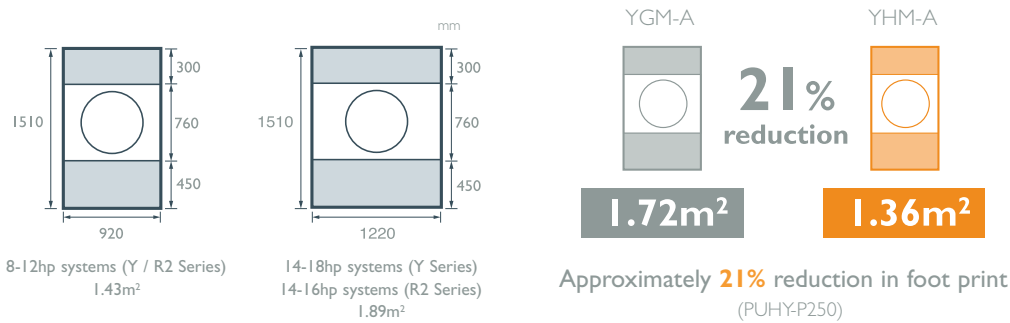
Environments such as gyms, laboratories etc often require the ability to cool lower than the standard comfort cooling setpoint. By selecting a dip switch on the unit, a cooling operation set temperature of 14°C DB is possible on the floor standing and ducted models only. The indoor unit fan will be fixed at high speed during this operation.



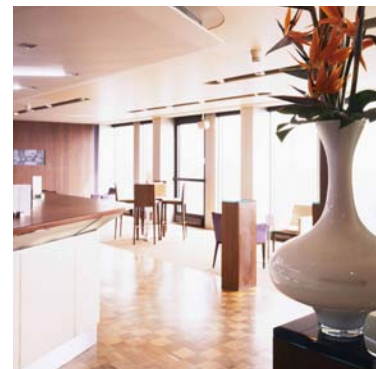
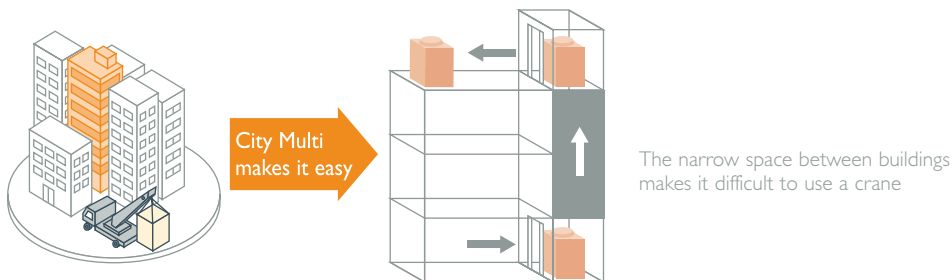
Effective use of space

The new models have a smaller foot print requirement than previous models. The width and depth have been reduced by 7% and 13% respectively, with the height being reduced by 130mm.

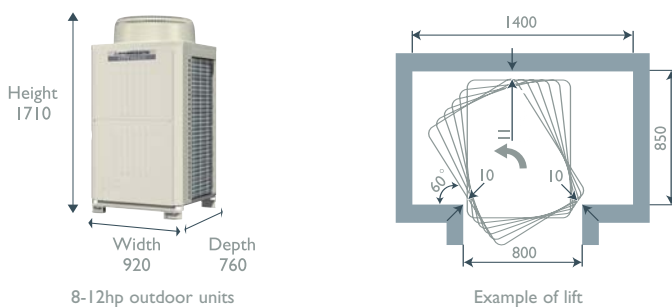
(PUHY-P250YHM-A compared to previous YGM-A versions).



The unit can easily be transported, even into inaccessible buildings



The downsized outdoor unit can be transported through an 800mm wide lift door



Weight reduction

Weight has been reduced by approximately 33kg

(PUHY-P250YHM-A compared to previous YGM-A versions).



Blue Fin treatment

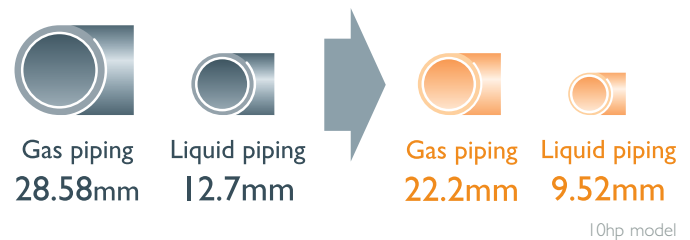
The anti-corrosion Blue Fin treatment of the heat exchanger is especially effective in urban environments where the traffic pollutions can damage the aluminium fins reducing the capacity and life expectancy of the unit.

All City Multi R410A outdoor units have been treated with Blue Fin



R410A pipe sizing

As R410A has a higher specific heat capacity than R22, the pipework is smaller. This means the pipe itself is cheaper, easier to install and less riser space is required within the building.



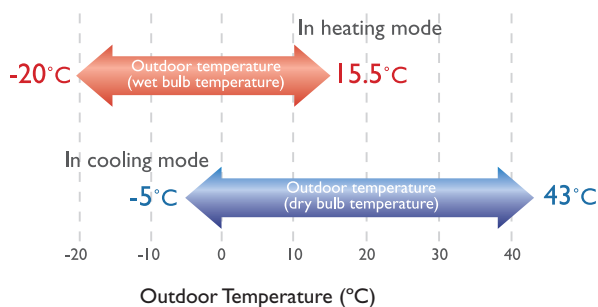
10hp model

Constant & comfortable indoor climates

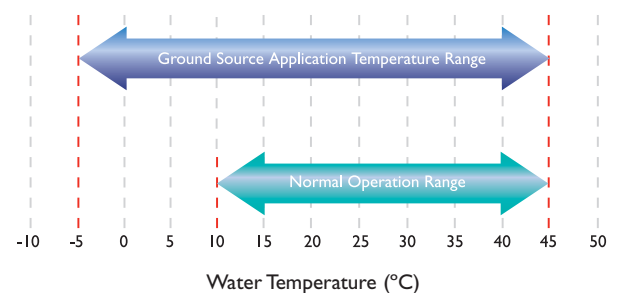
Heating operation range - Air cooled units

At low ambient temperatures the guaranteed operating range in heating is **minus 20°C**

Operating range in cooling is from an outdoor temperature of -5°C.



Water temperature operation range - WR2 / WY Water cooled units



City Multi exceeds current demands for Efficiency

The need for energy efficiency is paramount and is determined by legislation and regulation. Businesses saw their energy bills rise by up to 15% with the introduction of the Climate Change Levy in April 2001. A year later, the newly revised Part L (Part J in Scotland) of the building regulations placed new standards on design of buildings and plant deployed for heating, cooling and ventilating. A revised version to conform with the Energy Performance of Buildings Directive was also introduced in 2006; all geared to reducing energy consumption and therefore CO₂ emissions.

To encourage efficient use of energy, the UK Government introduced the Enhanced Capital Allowance Scheme (ECA). Qualifying products on the Energy Technology Product List include heat pumps for space heating. The City Multi range has been designed to ensure businesses qualify for ECA and benefit from the utmost efficiency, both financially and environmentally.



Mitsubishi Electric has produced a series of comprehensive CPD approved guides. These include:

- The Energy Performance of Buildings Directive (EPBD)
- Mixed Mode Cooling Systems
- Building Energy Management Systems (BEMS)
- Water Cooled VRF Systems
- The European F-Gas Regulation
- The New Part L of the Building Regulations 2006
- The New 10% Renewable Energy Target
- Heat Pump Boilers
- Part F of the Building Regulations
- The Code for Sustainable Homes
- Building Energy Ratings
- Renewable Energy Sources
- Maintenance, Replacement and the WEEE Directive
- Combined Heat and Power
- Carbon Reduction in the Built Environment
- The Application of Heat Pump Boilers
- The Enhanced Capital Allowance Scheme (2008)





Enhanced Capital Allowance Scheme (ECA)

The **key features** of the scheme:

- Under the scheme, all businesses liable for UK corporation tax, are able to claim an enhanced capital allowance on any qualifying expenditure (regardless of size and location of business or whether in the industrial or commercial sector)
- Businesses can offset the full cost of specific technologies (such as City Multi) against taxable profits of the period of the investment
- In order to qualify for this scheme, technology has to meet the energy saving criteria as published in the Energy Technology Criteria List. City Multi fully meets this criteria in its drive for energy efficiency
- Only investment in new and unused plant and machinery qualify

For further information go to www.eca.gov.uk and click on Mitsubishi Electric Air Conditioning under the heat pump category.



A wide choice of models

The new YHM-A air sourced outdoor models are modular in design and as such differing combinations of them can be connected together to create the required outdoor unit size needed for a particular application.

Both the Y Series and R2 ranges come in **standard (-P)** and **high COP (-EP)** versions. In addition, the standard versions allow for **space-saving** by virtue of the combination of units having a smaller foot print than the high COP versions.

The model line up

	Size	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
Series	Model Name	8hp	10hp	12hp	14hp	16hp	18hp	20hp	22hp	24hp	26hp	28hp	30hp	32hp	34hp	36hp	38hp	40hp	42hp	44hp	46hp	48hp	50hp
Y	PUHY-P YHM-A		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	PUHY-EP YHM-A	■		■		■	■	■	■	■	■	■	■	■	■	■							
R2	PURY-P YHM-A		■	■	■	■		■	■	■	■	■	■	■									
	PURY-EP YHM-A	■		■		■	■	■	■	■													

Y Series Heat Pump - Standard Version

Y Series (10-12hp) PUHY-P YHM-A		Y Series (14-18hp) PUHY-P YHM-A			Y Series (20-26hp) PUHY-P YSHM-A			
								
10hp PUHY-P250YHM-A		12hp PUHY-P300YHM-A			20hp PUHY-P500YSHM-A			
		14hp PUHY-P350YHM-A			22hp PUHY-P550YSHM-A			
		16hp PUHY-P400YHM-A			24hp PUHY-P600YSHM-A			
		18hp PUHY-P450YHM-A			26hp PUHY-P650YSHM-A			
Y Series (28-36hp) PUHY-P YSHM-A		Y Series (38-40hp) PUHY-P YSHM-A			Y Series (42hp) PUHY-P YSHM-A			
								
28hp PUHY-P700YSHM-A		38hp PUHY-P950YSHM-A			42hp PUHY-P1050YSHM-A			
30hp PUHY-P750YSHM-A		40hp PUHY-P1000YSHM-A						
32hp PUHY-P800YSHM-A								
34hp PUHY-P850YSHM-A								
36hp PUHY-P900YSHM-A								
					Y Series (44-50hp) PUHY-P YSHM-A			
								
					44hp PUHY-P1100YSHM-A			
					46hp PUHY-P1150YSHM-A			
					48hp PUHY-P1200YSHM-A			
					50hp PUHY-P1250YSHM-A			

Y Series Heat Pump - High COP Version

Y Series - High COP (8 - 12hp) PUHY-EP YHM-A



8hp	12hp
PUHY-EP200YHM-A	PUHY-EP300YHM-A

Y Series - High COP (16 - 20hp) PUHY-EP YSHM-A



16hp	18hp	20hp
PUHY-EP400YSHM-A	PUHY-EP450YSHM-A	PUHY-EP500YSHM-A

Y Series - High COP (22 - 26hp) PUHY-EP YSHM-A



22hp	24hp	26hp
PUHY-EP550YSHM-A	PUHY-EP600YSHM-A	PUHY-EP650YSHM-A

Y Series - High COP (28 - 30hp) PUHY-EP YSHM-A



28hp	30hp
PUHY-EP700YSHM-A	PUHY-EP750YSHM-A

Y Series - High COP (32 - 34hp) PUHY-EP YSHM-A



32hp	34hp
PUHY-EP800YSHM-A	PUHY-EP850YSHM-A

Y Series - High COP (36hp) PUHY-EP YSHM-A



36hp
PUHY-EP900YSHM-A

R2 Series Heat Recovery - Standard Version

R2 Series (10 - 12hp) PURY-P YHM-A



10hp	12hp
PURY-P250YHM-A	PURY-P300YHM-A

R2 Series (14 - 16hp) PURY-P YHM-A



14hp	16hp
PURY-P350YHM-A	PURY-P400YHM-A

R2 Series (18 - 24hp) PURY-P YSHM-A



20hp	22hp	24hp
PURY-P500YSHM-A	PURY-P550YSHM-A	PURY-P600YSHM-A

R2 Series (26 - 28hp) PURY-P YSHM-A



26hp	28hp
PURY-P650YSHM-A	PURY-P700YSHM-A

R2 Series (30 - 32hp) PURY-P YSHM-A



30hp	32hp
PURY-P750YSHM-A	PURY-P800YSHM-A

R2 Series Heat Recovery - High COP Version

R2 Series - High COP (8 - 12hp) PURY-EP YHM-A



8hp	12hp
PURY-EP200YHM-A	PURY-EP300YHM-A

R2 Series - High COP (16 - 18hp) PURY-EP YSHM-A



16hp	18hp
PURY-EP400YSHM-A	PURY-EP450YSHM-A

R2 Series - High COP (20 - 22hp) PURY-EP YSHM-A



20hp	22hp
PURY-EP500YSHM-A	PURY-EP550YSHM-A

R2 Series - High COP (24hp) PURY-EP YSHM-A



24hp
PURY-EP600YSHM-A

City Multi Product Range Overview

Outdoor Units

14kW Cooling Capacity ←

Y Series (4/5/6hp)



PUMY-PI00-140V/YHMA

WY / WR2



PQ(H/R)Y-P200/250YGM-A

WY / WR2



PQ(H/R)Y-P400/500YSGM-A

Indoor Units

Model / Size	15 (1.7kW)	20 (2.2kW)	25 (2.8kW)	32 (3.6kW)	40 (4.5kW)
PLFY-P-VBM-E					
PLFY-P-VCM-E					
PLFY-P-VLMD-E					
PMFY-P-VBM-E					
PEFY-P-VMS1-E					
PEFY-P-VMM-E					
PEFY-P-VMH-E					
PCFY-P-VGM-E					
PKFY-P-VBM/VGM/VFM-E					
PFFY-P-VLRM-E					
PFFY-P-VLRMM-E					
PFFY-P-VLEM-E					
PFFY-P-VKM-E					
GUF-RD3					
PQFY-P					











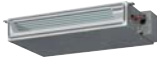
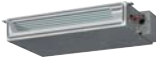


















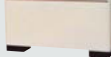
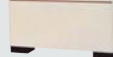



Y / R2 Series High COP

Y / R2 Series High COP



PUH/RV-EP200YHM-A

PUH/RV-EP300YHM-A

50 (5.6kW)	63 (7.1kW)	80 (9.0kW)	100 (11.2kW)	125 (14.0kW)	140 (16.0kW)	250 (28.0kW)
						
						
						
						
						
						
						
						
						
						
						
						

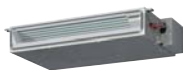
The energy efficient City Multi VRF range



Unique 2-pipe technology provides



simultaneous heating and cooling, alongside excellent energy



efficiency and corresponding EER/COP



ratings. Up to 50 indoor units can be connected to a single

outdoor unit, offering the sophistication,



control and energy efficiency



demanded today.



Simple technology at its best



Systems marked with the ECA logo are registered on the Energy Technology List and hence qualify for 100% first year enhanced capital allowances (whole system cost and 'reasonable' cost of installation). For further information please go to www.eca.gov.uk

Nominal conditions cooling: indoor 27°C DB, 19°C WB; outdoor 35°C DB, 24°C WB.

Nominal conditions heating: indoor 20°C DB; outdoor 7°C DB, 6°C WB.

UK Conditions: Summer; indoor 21°C DB, 15°C WB; outdoor 27°C DB. Winter; indoor 21°C DB; outdoor -1°C WB.

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CITY MULTI

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Y Series (4-6hp)

Heat Pump Outdoor Unit

The latest in Mitsubishi Electric R410A Y Series technology. The new City Multi models allow up to 8 indoor units to be connected to a single outdoor unit, using the standard branch/header pipework system proven in the larger models. Utilising the latest Mitsubishi Electric inverter technology, the system is fully controllable with all City Multi controllers or linked to third party BEMS.

- A two core non-polar transmission line allows for simple installation of up to eight indoor units
- Latest in inverter technology including a highly efficient DC Scroll Compressor, DC fan motor and Demand Control
- The condensing unit is extremely slimline which allows easy location and application of the system
- Single or three phase power supply
- Anti-Corrosion blue and flat fin technology
- Size I5 PEFY-P-VMS1-E now able to connect to PUMY



Technical Information

Y SERIES OUTDOOR UNIT - 4-6hp

MODEL REFERENCE		PUMY-P100VHMA	PUMY-P100YHMA	PUMY-P125VHMA	PUMY-P125YHMA	PUMY-P140VHMA	PUMY-P140YHMA
CAPACITY (kW)	Heating (nominal)	12.5	12.5	16.0	16.0	18.0	18.0
	Cooling (nominal)	11.2	11.2	14.0	14.0	15.5	15.5
	Heating (UK)	10.4	10.4	13.3	13.3	14.9	14.9
	Cooling (UK)	10.3	10.3	12.9	12.9	14.3	14.3
POWER INPUT (kW)	Heating (nominal)	3.66	3.63	4.33	4.29	5.58	5.32
	Cooling (nominal)	3.34	3.3	4.32	4.27	5.35	5.32
	Heating (UK)	3.27	3.23	3.85	3.82	4.99	4.73
	Cooling (UK)	2.84	2.81	3.66	3.63	4.53	4.52
COP / EER (nominal)		3.42 / 3.35	3.44 / 3.39	3.69 / 3.24	3.73 / 3.28	3.23 / 2.90	3.38 / 2.91
Max no. OF CONNECTABLE INDOOR UNITS		6	6	8	8	8	8
Max CONNECTABLE CAPACITY		14.5 (130%)	14.5 (130%)	18.2 (130%)	18.2 (130%)	20.2 (130%)	20.2 (130%)
AIRFLOW (m3/min)		100	100	100	100	100	100
PIPE SIZE mm(in)	Gas	15.88 (5/8")	15.88 (5/8")	15.88 (5/8")	15.88 (5/8")	15.88 (5/8")	15.88 (5/8")
	Liquid	9.52 (3/8")	9.52 (3/8")	9.52 (3/8")	9.52 (3/8")	9.52 (3/8")	9.52 (3/8")
NOISE (dBA)		51 / 49	51 / 49	52 / 50	52 / 50	53 / 51	53 / 51
WEIGHT (kg)		127	140	127	140	127	140
DIMENSIONS (mm)	Width	950	950	950	950	950	950
	Depth	330+30	330+30	330+30	330+30	330+30	330+30
	Height	1350	1350	1350	1350	1350	1350
ELECTRICAL SUPPLY		220-240v, 50Hz	380-415v, 50Hz	220-240v, 50Hz	380-415v, 50Hz	220-240v, 50Hz	380-415v, 50Hz
PHASE		Single	3	Single	3	Single	3
STARTING CURRENT (A)		5	5	5	5	5	5
RUNNING CURRENT (A)	Heating	15.5	5.32	18.3	6.29	23.6	7.8
	Cooling	14.1	4.84	18.3	6.26	22.7	7.8
GUARANTEED OPERATING RANGE	Cooling	-5°C ~ 46°C	-5°C ~ 46°C	-5°C ~ 46°C	-5°C ~ 46°C	-5°C ~ 46°C	-5°C ~ 46°C
	Heating	-15°C ~ 15°C	-15°C ~ 15°C	-15°C ~ 15°C	-15°C ~ 15°C	-15°C ~ 15°C	-15°C ~ 15°C
FUSE RATING (BS88) - HRC (A)		40	16	40	16	50	16
MAINS CABLE No. Cores		3	4 + earth	3	4 + earth	3	4 + earth

PUMY-P100-140VHMA/YHMA Piping Restrictions

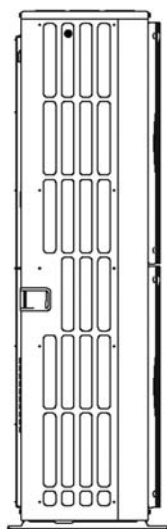
TOTAL PIPING LENGTH	120m max
FURTHEST PIPING LENGTH	80m max
FURTHEST PIPING LENGTH AFTER 1st BRANCH	30m max
BETWEEN INDOOR AND OUTDOOR UNITS - HEIGHT	30m max (20m max if outdoor installed below)
BETWEEN INDOOR AND INDOOR UNITS - HEIGHT	12m max

Optional Parts

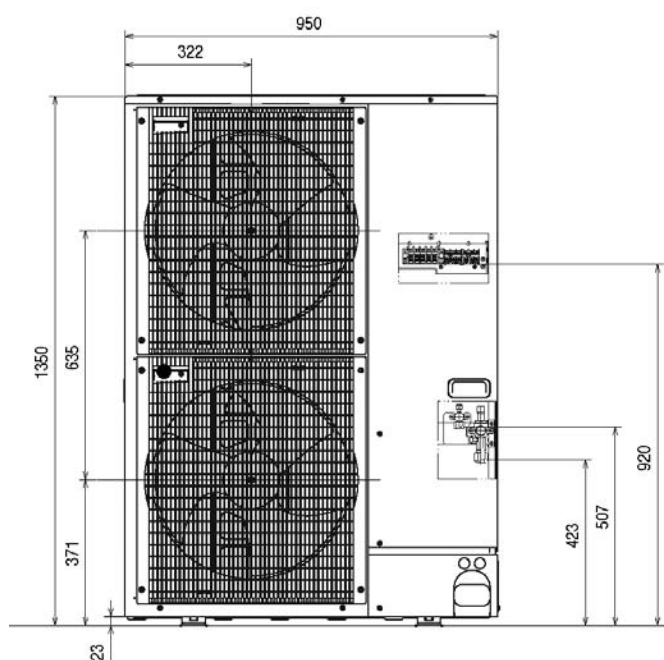
Model Name	Description
CMY-Y62-G-E	Branch Pipe (2 Branch)

Dimensions

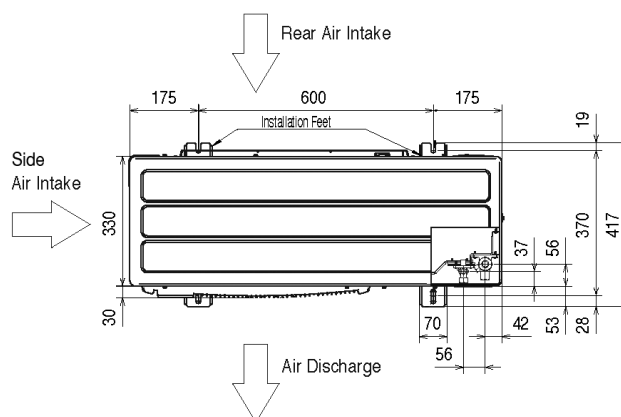
Side View >



Front View >



Upper View >



Y Series Standard (10-18hp)

Heat Pump Outdoor Unit

Improved for even higher efficiency

The City Multi Y series makes use of a two pipe refrigerant circuit throughout, with the choice of either Branch Pipe or Header Pipe feeds to indoor units, with manual changeover from cooling to heating to ensure that a constant indoor climate is maintained.

- New wrap around coil for improved energy efficiency
- Choice of Branch Pipe or Header Pipe feeds to indoor units
- Energy-saving inverter driven outdoor compressor units with very low start currents
- No requirement for plant rooms or bulky service shafts
- Weight and size reduction compared to previous YGM-A models
- Improved pipe run of 165m, with a total system pipe length of 1000m
- 100% inverter control
- High Sensible Cooling Function - By raising the off coil temperature, a 10% increase in sensible cooling capacity over standard operation is achievable, the result being greater comfort for occupants



Technical Information

Y SERIES STANDARD OUTDOOR UNITS 10-18hp

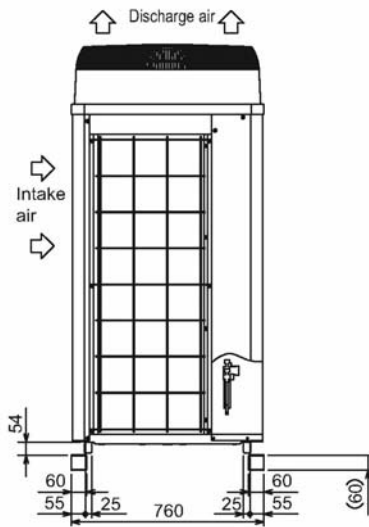
MODEL REFERENCE		PUHY-P250YHM-A	PUHY-P300YHM-A	PUHY-P350YHM-A	PUHY-P400YHM-A	PUHY-P450YHM-A
CAPACITY (kW)	Heating (nominal)	31.5	37.5	45.0	50.0	56.0
	Cooling (nominal)	28.0	33.5	40.0	45.0	50.0
	Heating (UK)	28.7	33.0	39.6	44.0	48.7
	Cooling (UK)	26.6	31.5	37.6	42.3	46.0
POWER INPUT (kW)	Heating (nominal)	7.83	9.39	12.09	13.47	15.38
	Cooling (nominal)	7.73	9.07	11.20	13.23	16.28
	Heating (UK)	7.75	9.11	11.73	13.07	14.00
	Cooling (UK)	4.79	6.71	8.29	9.79	11.40
COP/EER (nominal)		4.02 / 3.62	3.99 / 3.69	3.72 / 3.57	3.71 / 3.40	3.64 / 3.07
MAX No. OF CONNECTABLE INDOOR UNITS		21	26	30	34	39
AIRFLOW (m3/min) High		185	185	225	225	225
NOISE (dBA)		57	59	60	61	62
WEIGHT (kg)		200	215	245	245	245
DIMENSIONS (mm)	Width	920	920	1220	1220	1220
	Depth	760	760	760	760	760
	(1650mm without legs) Height	1710	1710	1710	1710	1710
ELECTRICAL SUPPLY		380-415v, 50Hz	380-415v, 50Hz	380-415v, 50Hz	380-415v, 50Hz	380-415v, 50Hz
PHASE		3	3	3	3	3
STARTING CURRENT (A)		8	8	8	8	8
RUNNING CURRENT (A)	Heating	12.1	14.5	18.6	20.8	23.7
	Cooling	11.9	14.0	17.3	20.4	25.1
FUSE RATING (MCB sizes BS EN 60947-2) - (A)		32	32	32	40	50
MAINS CABLE No. Cores		4 + earth	4 + earth	4 + earth	4 + earth	4 + earth

PUHY-P250-450YHM-A Piping Restrictions

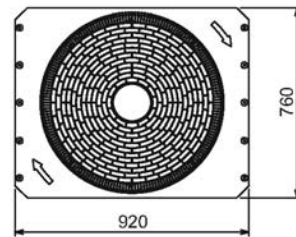
TOTAL PIPING LENGTH	1000m max
FURTHEST PIPING LENGTH	165m max
FURTHEST PIPING LENGTH AFTER 1st BRANCH	40m max
BETWEEN INDOOR AND OUTDOOR UNITS - HEIGHT	50m max (40m max if outdoor installed below)
BETWEEN INDOOR AND INDOOR UNITS - HEIGHT	15m max

PUHY-P250, 300YHM-A

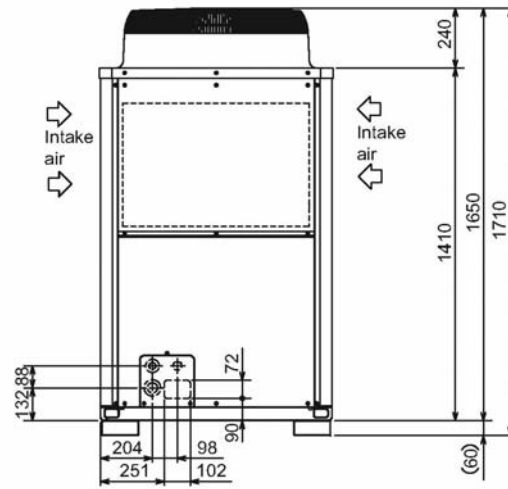
Side View >



Upper View >

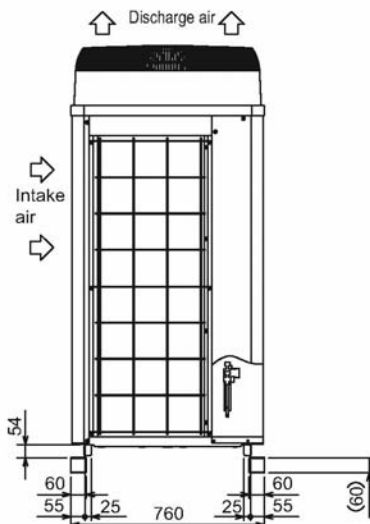


Front View >

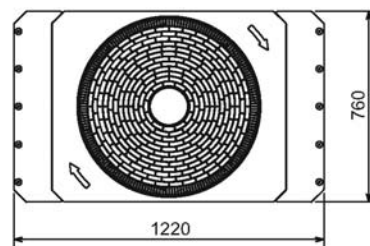


PUHY-P350, 400, 450YHM-A

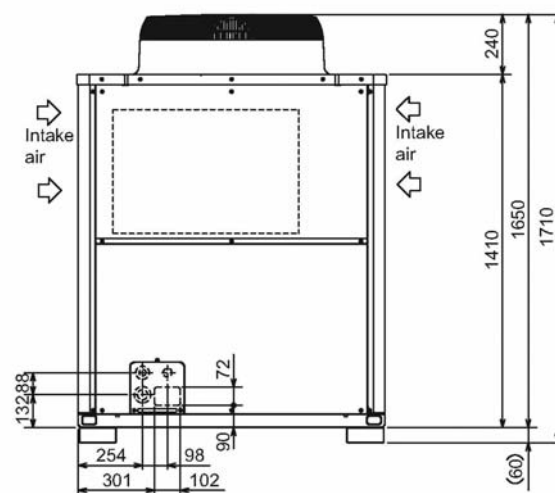
Side View >



Upper View >



Front View >



Y Series Standard (20-36hp)

Heat Pump Outdoor Unit

Improved for even higher efficiency

The City Multi Y series makes use of a two pipe refrigerant circuit throughout, with the choice of either Branch Pipe or Header Pipe feeds to indoor units, with manual changeover from cooling to heating to ensure that a constant indoor climate is maintained.

- New wrap around coil for improved energy efficiency
- Choice of Branch Pipe or Header Pipe feeds to indoor units
- Energy-saving inverter driven outdoor compressor units with very low start currents
- No requirement for plant rooms or bulky service shafts
- Weight and size reduction compared to previous YGM-A models
- Improved pipe run of 165m, with a total system pipe length of 1000m
- 100% inverter control
- High Sensible Cooling Function - By raising the off coil temperature, a 10% increase in sensible cooling capacity over standard operation is achievable, the result being greater comfort for occupants



Technical Information

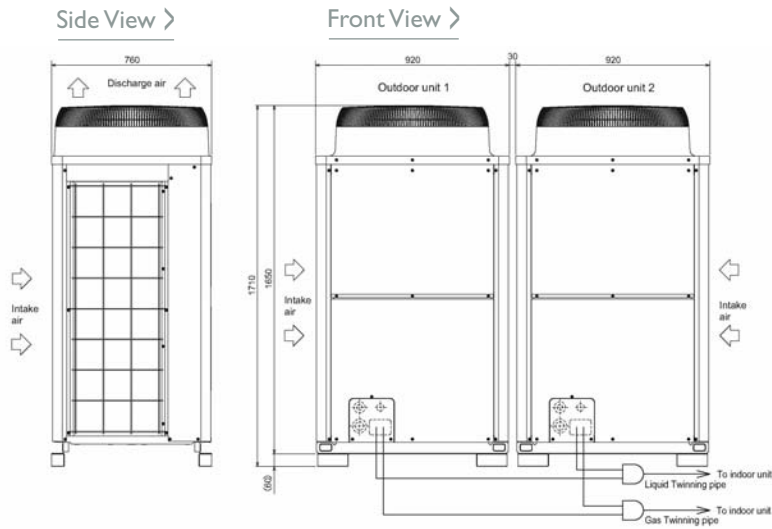
Y SERIES STANDARD OUTDOOR UNITS 20-36hp

MODEL REFERENCE		PUHY-P500YSHM-A	PUHY-P550YSHM-A	PUHY-P600YSHM-A	PUHY-P650YSHM-A	PUHY-P700YSHM-A	PUHY-P750YSHM-A	PUHY-P800YSHM-A	PUHY-P850YSHM-A	PUHY-P900YSHM-A
CAPACITY (kW)	Heating (nominal)	63.0	69.0	76.5	81.5	88.0	95.0	100.0	108.0	113.0
	Cooling (nominal)	56.0	63.0	69.0	73.0	80.0	85.0	90.0	96.0	101.0
	Heating (UK)	54.8	60.0	66.6	70.9	75.7	81.7	86.0	95.0	99.4
	Cooling (UK)	51.5	58.0	63.5	67.2	73.6	78.2	82.8	88.3	92.9
POWER INPUT (kW)	Heating (nominal)	16.40	18.06	19.92	21.90	23.71	25.46	25.70	28.42	30.29
	Cooling (nominal)	16.47	18.36	18.75	20.79	22.47	25.07	27.69	30.18	33.33
	Heating (UK)	14.92	16.43	18.13	19.93	22.05	23.68	23.90	26.15	27.87
	Cooling (UK)	11.53	12.85	13.13	14.55	16.18	18.05	19.94	19.92	22.00
COP/EER (nominal)		3.84 / 3.40	3.82 / 3.43	3.84 / 3.68	3.72 / 3.51	3.71 / 3.56	3.73 / 3.39	3.89 / 3.25	3.80 / 3.18	3.73 / 3.03
MAX No. OF CONNECTABLE INDOOR UNITS		43	47	50	50	50	50	50	50	50
AIRFLOW (m3/min) High		185 / 185	185 / 185	225 / 185	225 / 185	225 / 225	225 / 225	225 / 225	225 / 225	225 / 225
NOISE (dBA)		60	60.5	60.5	61	61	63	64	64.5	64.5
WEIGHT (kg)		200 + 200	215 + 200	245 + 200	245 + 215	245 + 245	245 + 245	245 + 245	245 + 245	245 + 245
DIMENSIONS (mm)	Width	920 + 920	920 + 920	1220 + 920	1220 + 920	1220 + 1220	1220 + 1220	1220 + 1220	1220 + 1220	1220 + 1220
	Depth	760	760	760	760	760	760	760	760	760
	(1650mm without legs) Height	1710	1710	1710	1710	1710	1710	1710	1710	1710
ELECTRICAL SUPPLY		380-415v, 50Hz	380-415v, 50Hz	380-415v, 50Hz	380-415v, 50Hz	380-415v, 50Hz	380-415v, 50Hz	380-415v, 50Hz	380-415v, 50Hz	380-415v, 50Hz
PHASE		3	3	3	3	3	3	3	3	3
STARTING CURRENT (A)		8 / 8	8 / 8	8 / 8	8 / 8	8 / 8	8 / 8	8 / 8	8 / 8	8 / 8
RUNNING CURRENT (A)	Heating	25.3	27.9	30.7	33.8	36.6	39.3	39.7	43.9	46.8
	Cooling	25.4	28.3	28.9	32.1	34.7	38.7	42.8	46.6	51.5
FUSE RATING (MCB sizes BS EN 60947-2) - (A)		32 / 32	32 / 32	32 / 32	32 / 32	32 / 32	40 / 32	50 / 32	50 / 40	50 / 50
MAINS CABLE No. Cores		4 + earth	4 + earth	4 + earth	4 + earth	4 + earth	4 + earth	4 + earth	4 + earth	4 + earth

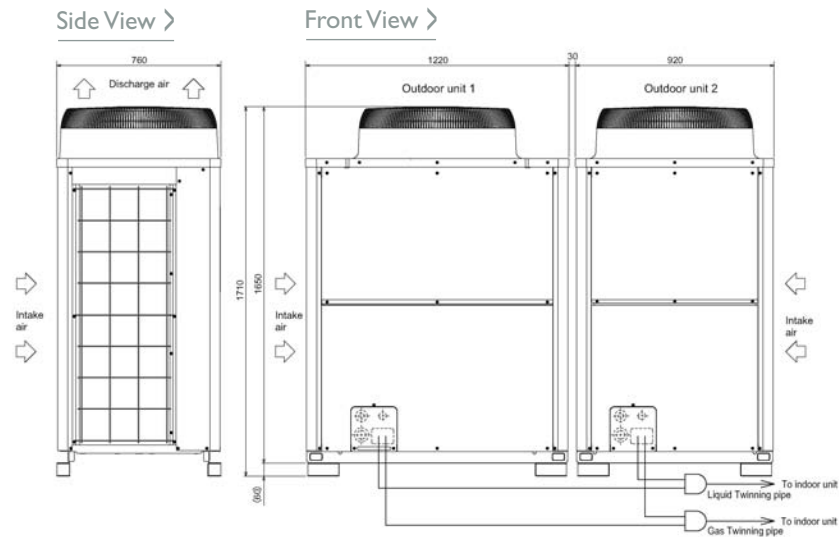
PUHY-P500-900YSHM-A Piping Restrictions

TOTAL PIPING LENGTH	1000m max
FURTHEST PIPING LENGTH	165m max
FURTHEST PIPING LENGTH AFTER 1st BRANCH	40m max
BETWEEN INDOOR AND OUTDOOR UNITS - HEIGHT	50m max (40m max if outdoor installed below)
BETWEEN INDOOR AND INDOOR UNITS - HEIGHT	15m max

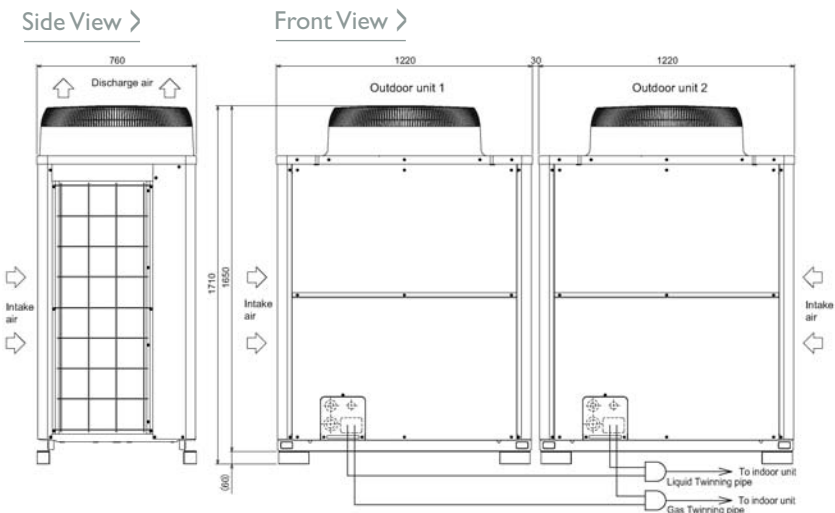
PUHY-P500, 550YSHM-A



PUHY-P600, 650YSHM-A



PUHY-P700, 750, 800, 850, 900YSHM-A



Y Series Standard (38-50hp)

Heat Pump Outdoor Unit

Improved for even higher efficiency

The City Multi Y series makes use of a two pipe refrigerant circuit throughout, with the choice of either Branch Pipe or Header Pipe feeds to indoor units, with manual changeover from cooling to heating to ensure that a constant indoor climate is maintained.

- New wrap around coil for improved energy efficiency
- Choice of Branch Pipe or Header Pipe feeds to indoor units
- Energy-saving inverter driven outdoor compressor units with very low start currents
- No requirement for plant rooms or bulky service shafts
- Weight and size reduction compared to previous YGM-A models
- Improved pipe run of 165m, with a total system pipe length of 1000m
- 100% inverter control
- High Sensible Cooling Function - By raising the off coil temperature, a 10% increase in sensible cooling capacity over standard operation is achievable, the result being greater comfort for occupants



Technical Information

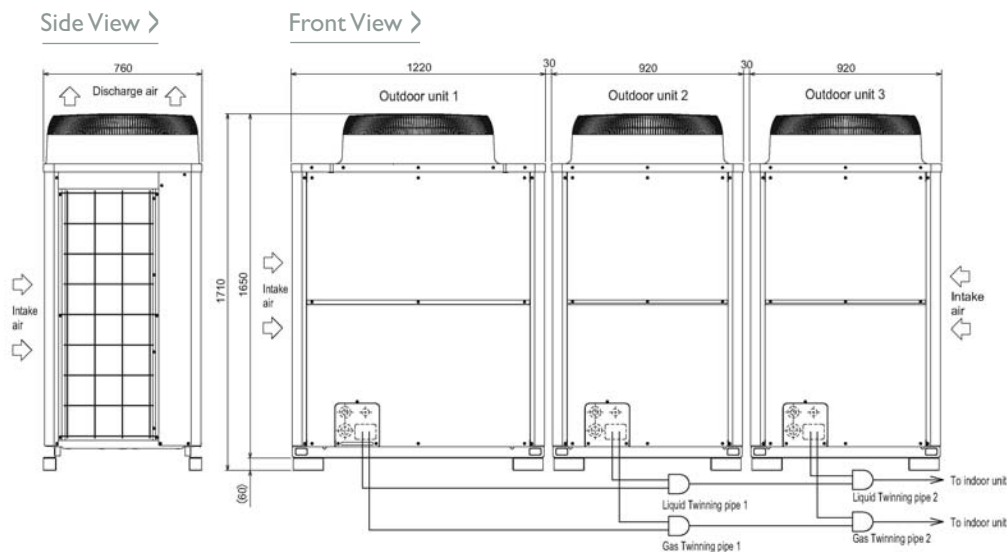
Y SERIES STANDARD OUTDOOR UNITS 38-50hp

MODEL REFERENCE		PUHY-P950YSHM-A	PUHY-P1000YSHM-A	PUHY-P1050YSHM-A	PUHY-P1100YSHM-A	PUHY-P1150YSHM-A	PUHY-P1200YSHM-A	PUHY-P1250YSHM-A
CAPACITY (kW)	Heating (nominal)	119.5	127.0	132.0	140.0	145.0	150.0	156.5
	Cooling (nominal)	108.0	113.0	118.0	124.0	130.0	136.0	140.0
	Heating (UK)	105.2	111.8	116.2	123.2	127.6	132.0	137.7
	Cooling (UK)	99.4	104.0	108.6	114.1	119.6	125.1	128.8
POWER INPUT (kW)	Heating (nominal)	30.02	33.15	35.01	36.93	39.08	40.10	42.06
	Cooling (nominal)	30.68	32.47	33.90	35.83	39.39	41.71	45.01
	Heating (UK)	27.62	30.50	32.21	33.98	35.95	36.89	38.70
	Cooling (UK)	20.25	21.43	22.37	23.65	26.00	27.53	29.71
COP/EER (nominal)		3.98 / 3.52	3.83 / 3.48	3.77 / 3.48	3.79 / 3.46	3.71 / 3.30	3.74 / 3.26	3.72 / 3.11
MAX No. OF CONNECTABLE INDOOR UNITS		50	50	50	50	50	50	50
AIRFLOW (m3/min) High		185 / 185 / 185	225 / 185 / 185	225 / 225 / 185	225 / 225 / 225	225 / 225 / 225	225 / 225 / 225	225 / 225 / 225
NOISE (dBA)		64	64	64	64	64.5	65	65.5
WEIGHT (kg)		245 + 215 + 200	245 + 215 + 215	245 + 245 + 200	245 + 245 + 245	245 + 245 + 245	245 + 245 + 245	245 + 245 + 245
DIMENSIONS (mm)	Width	1220 + 920 + 920	1220 + 920 + 920	1220 + 1220 + 920	1220 + 1220 + 1220	1220 + 1220 + 1220	1220 + 1220 + 1220	1220 + 1220 + 1220
	Depth	760	760	760	760	760	760	760
	(1650mm without legs) Height	1710	1710	1710	1710	1710	1710	1710
ELECTRICAL SUPPLY		380-415v, 50Hz	380-415v, 50Hz	380-415v, 50Hz	380-415v, 50Hz	380-415v, 50Hz	380-415v, 50Hz	380-415v, 50Hz
PHASE		3	3	3	3	3	3	3
STARTING CURRENT (A)		8 / 8 / 8	8 / 8 / 8	8 / 8 / 8	8 / 8 / 8	8 / 8 / 8	8 / 8 / 8	8 / 8 / 8
RUNNING CURRENT (A)	Heating	46.4	51.2	54.1	57.0	60.4	61.9	65.0
	Cooling	47.4	50.1	52.4	55.3	60.8	64.4	69.5
FUSE RATING (MCB sizes BS EN 60947-2) - (A)		40 / 32 / 32	40 / 32 / 32	40 / 32 / 32	40 / 32 / 32	50 / 32 / 32	50 / 40 / 32	50 / 50 / 32
MAINS CABLE No. Cores		4 + earth	4 + earth	4 + earth	4 + earth	4 + earth	4 + earth	4 + earth

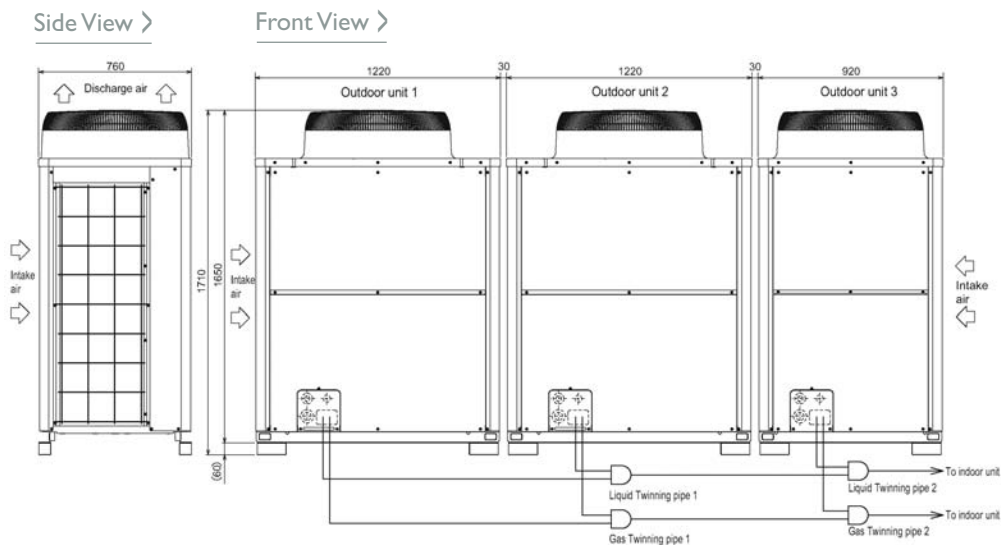
PUHY-P950-1250YSHM-A Piping Restrictions

TOTAL PIPING LENGTH	1000m max
FURTHEST PIPING LENGTH	165m max
FURTHEST PIPING LENGTH AFTER 1st BRANCH	40m max
BETWEEN INDOOR AND OUTDOOR UNITS - HEIGHT	50m max (40m max if outdoor installed below)
BETWEEN INDOOR AND INDOOR UNITS - HEIGHT	15m max

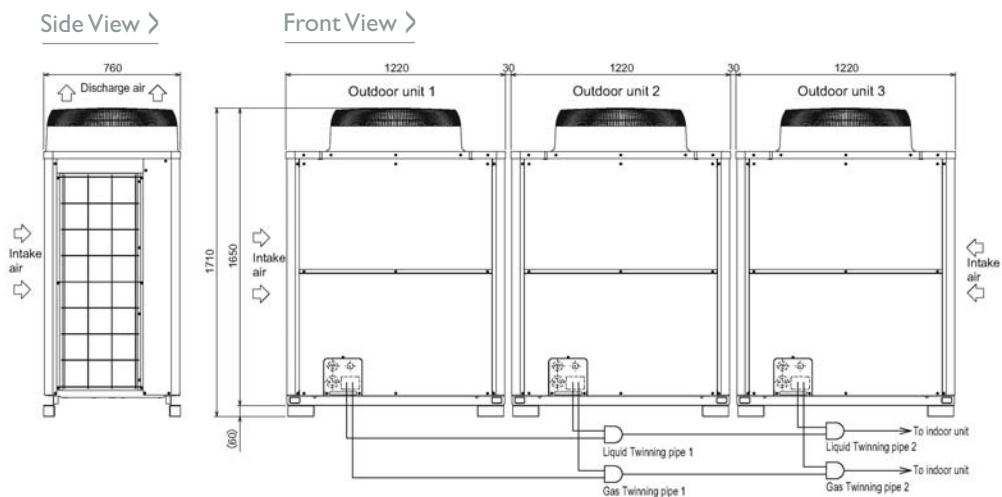
PUHY-P950, 1000YSHM-A



PUHY-P1050YSHM-A



PUHY-P1100, 1150, 1200, 1250YSHM-A



Y Series High COP (8-26hp)

Heat Pump Outdoor Unit

Improved for even higher efficiency

The City Multi Y series makes use of a two pipe refrigerant circuit throughout, with the choice of either Branch Pipe or Header Pipe feeds to indoor units, with manual changeover from cooling to heating to ensure that a constant indoor climate is maintained.

- Highest ever COP's / EER's due to new higher efficiency inverter technology and wrap around coil
- Choice of Branch Pipe or Header Pipe feeds to indoor units
- Energy-saving inverter driven outdoor compressor units with very low start currents
- No requirement for plant rooms or bulky service shafts
- Weight and size reduction compared to previous YGM-A models
- Improved pipe run of 165m, with a total system pipe length of 1000m
- 100% inverter control
- High Sensible Cooling Function - By raising the off coil temperature, a 10% increase in sensible cooling capacity over standard operation is achievable, the result being greater comfort for occupants



Technical Information

Y SERIES HIGH COP OUTDOOR UNIT 8-26hp

MODEL REFERENCE		PUHYEP200YHM-A	PUHYEP300YHM-A	PUHYEP400YSHM-A	PUHYEP450YSHM-A	PUHYEP500YSHM-A	PUHYEP550YSHM-A	PUHYEP600YSHM-A	PUHYEP650YSHM-A
CAPACITY (kW)	Heating (nominal)	25.0	37.5	50.0	56.0	63.0	69.0	76.5	81.5
	Cooling (nominal)	22.4	33.5	45.0	50.0	56.0	63.0	69.0	73.0
	Heating (UK)	23.0	33.0	44.0	48.7	54.8	60.0	66.6	70.9
	Cooling (UK)	21.3	31.5	42.3	46.0	51.5	58.0	63.5	67.2
POWER INPUT (kW)	Heating (nominal)	5.77	9.28	11.54	13.05	15.14	17.12	18.93	19.13
	Cooling (nominal)	5.18	8.25	10.41	13.15	13.46	16.32	16.99	18.34
	Heating (UK)	5.71	9.00	11.19	11.88	13.78	15.58	17.23	17.41
	Cooling (UK)	3.21	6.11	7.70	9.21	9.42	11.42	11.89	12.84
COP/EER (nominal)		4.33 / 4.32	4.04 / 4.06	4.33 / 4.32	4.29 / 3.80	4.16 / 4.16	4.03 / 3.86	4.04 / 4.06	4.26 / 3.98
MAX No. OF CONNECTABLE INDOOR UNITS		17	26	34	39	43	47	50	50
AIRFLOW (m3/min) High		185	225	185 / 185	185 / 185	225 / 185	225 / 185	225 / 225	225 / 225
NOISE (dBA)		57	60	60	60	62	62	63	63
WEIGHT (kg)		200	245	200 + 200	200 + 200	245 + 200	245 + 200	245 + 245	245 + 245
DIMENSIONS (mm)	Width	920	1220	920 + 920	920 + 920	1220 + 920	1220 + 920	1220 + 1220	1220 + 1220
	Depth	760	760	760	760	760	760	760	760
	(1650mm without legs) Height	1710	1710	1710	1710	1710	1710	1710	1710
ELECTRICAL SUPPLY		380-415v, 50Hz	380-415v, 50Hz	380-415v, 50Hz	380-415v, 50Hz	380-415v, 50Hz	380-415v, 50Hz	380-415v, 50Hz	380-415v, 50Hz
PHASE		3	3	3	3	3	3	3	3
STARTING CURRENT (A)		8	8	8 / 8	8 / 8	8 / 8	8 / 8	8 / 8	8 / 8
RUNNING CURRENT (A)	Heating	8.9	14.3	17.8	20.1	23.4	26.4	29.2	29.5
	Cooling	8.0	12.7	16.0	20.3	20.8	25.2	26.2	28.3
FUSE RATING (MCB sizes BS EN 60947-2) - (A)		20	32	20 / 20	32 / 20	32 / 20	32 / 32	32 / 32	32 / 32
MAINS CABLE No. Cores		4 + earth	4 + earth	4 + earth	4 + earth	4 + earth	4 + earth	4 + earth	4 + earth

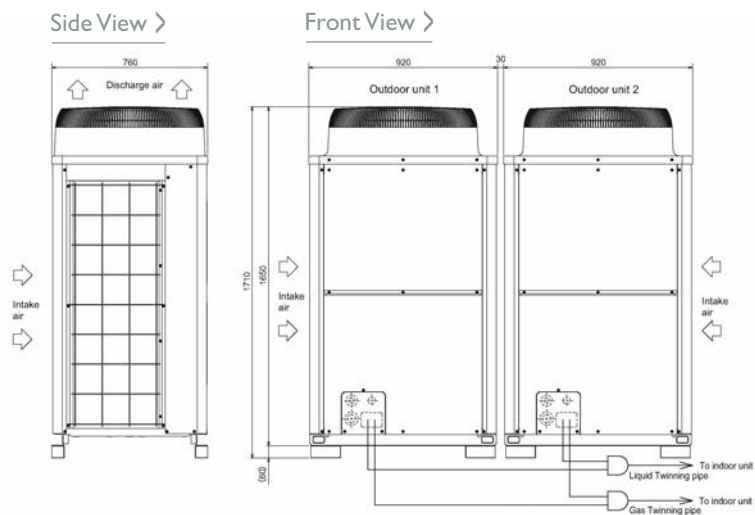
PUHY-EP200-650Y(S)HM-A Piping Restrictions

TOTAL PIPING LENGTH	1000m max
FURTHEST PIPING LENGTH	165m max
FURTHEST PIPING LENGTH AFTER 1st BRANCH	40m max
BETWEEN INDOOR AND OUTDOOR UNITS - HEIGHT	50m max (40m max if outdoor installed below)
BETWEEN INDOOR AND INDOOR UNITS - HEIGHT	15m max

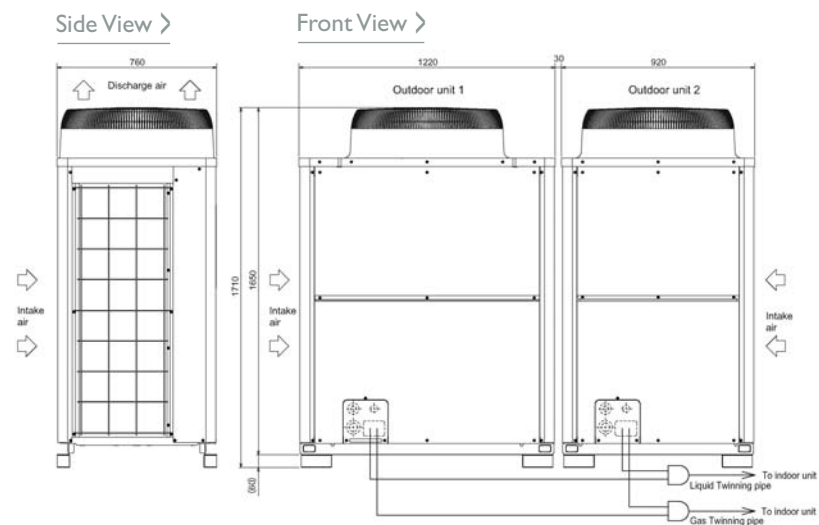
PUHY-EP200, 300YHM-A

PUHY-EP200YHM-A schematic is the same as PUHY-P250, 300YHM-A on page 141
 PUHY-EP300YHM-A schematic is the same as PUHY-P350, 400, 450YHM-A on page 141

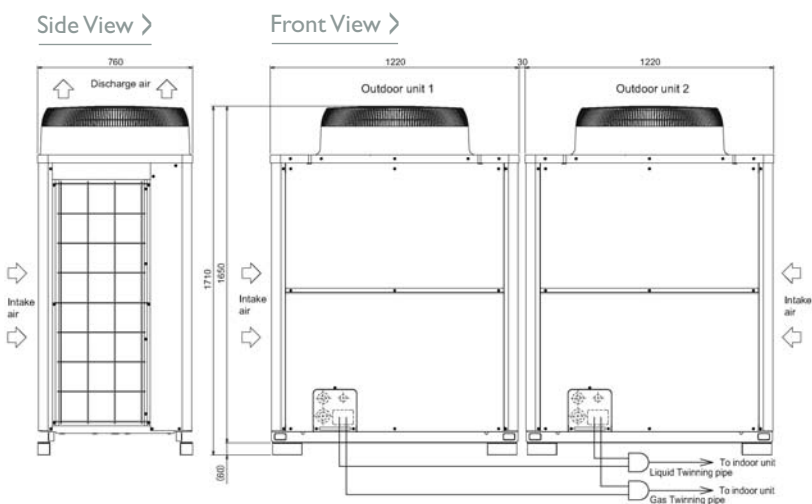
PUHY-EP400, 450YSHM-A



PUHY-EP500, 550YSHM-A



PUHY-EP600, 650YSHM-A



Y Series High COP (28-36hp)

Heat Pump Outdoor Unit

Improved for even higher efficiency

The City Multi Y series makes use of a two pipe refrigerant circuit throughout, with the choice of either Branch Pipe or Header Pipe feeds to indoor units, with manual changeover from cooling to heating to ensure that a constant indoor climate is maintained.

- Highest ever COP's / EER's due to new higher efficiency inverter technology and wrap around coil
- Choice of Branch Pipe or Header Pipe feeds to indoor units
- Energy-saving inverter driven outdoor compressor units with very low start currents
- No requirement for plant rooms or bulky service shafts
- Weight and size reduction compared to previous YGM-A models
- Improved pipe run of 165m, with a total system pipe length of 1000m
- 100% inverter control
- High Sensible Cooling Function - By raising the off coil temperature, a 10% increase in sensible cooling capacity over standard operation is achievable, the result being greater comfort for occupants



Technical Information

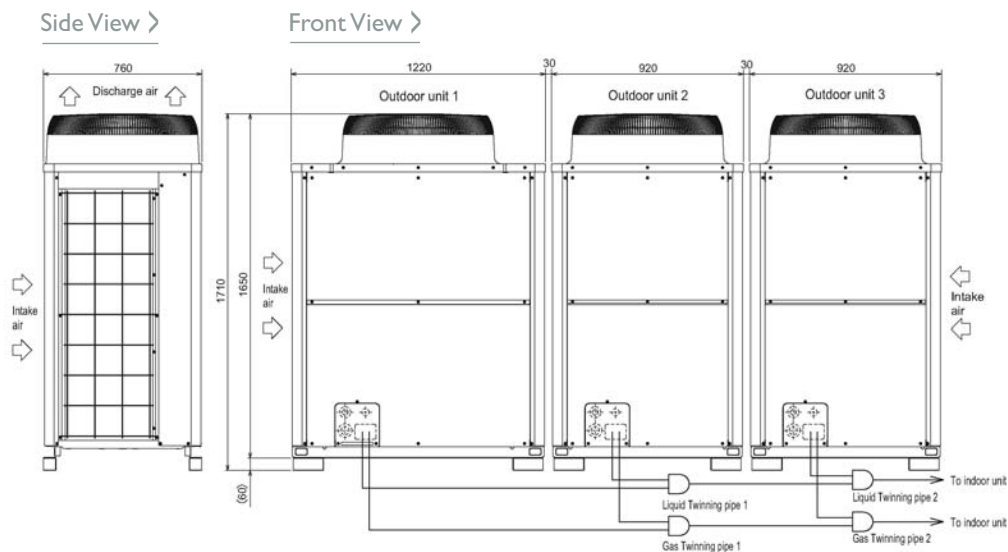
Y SERIES HIGH COP OUTDOOR UNIT 28-36hp

MODEL REFERENCE		PUHY-EP700YSHM-A	PUHY-EP750YSHM-A	PUHY-EP800YSHM-A	PUHY-EP850YSHM-A	PUHY-EP900YSHM-A
CAPACITY (kW)	Heating (nominal)	88.0	95.0	100.0	108.0	113.0
	Cooling (nominal)	80.0	85.0	90.0	96.0	101.0
	Heating (UK)	75.7	81.7	86.0	95.0	99.4
	Cooling (UK)	73.6	78.2	82.8	88.3	92.9
POWER INPUT (kW)	Heating (nominal)	20.00	22.19	23.41	25.59	27.90
	Cooling (nominal)	20.99	21.79	22.00	24.67	24.87
	Heating (UK)	18.60	20.64	21.77	23.54	25.67
	Cooling (UK)	15.11	15.69	15.84	16.28	16.41
COP/EER (nominal)		4.40 / 3.81	4.28 / 3.90	4.27 / 4.09	4.22 / 3.89	4.05 / 4.06
MAX No. OF CONNECTABLE INDOOR UNITS		50	50	50	50	50
AIRFLOW (m3/min)		225 / 185 / 185	225 / 185 / 185	225 / 225 / 185	225 / 225 / 185	225 / 225 / 225
NOISE (dBA)		63	63	64	64	65
WEIGHT (kg)		245 + 200 + 200	245 + 200 + 200	245 + 245 + 200	245 + 245 + 200	245 + 245 + 245
DIMENSIONS (mm)	Width	1220 + 920 + 920	1220 + 920 + 920	1220 + 1220 + 920	1220 + 1220 + 920	1220 + 1220 + 1220
	Depth	760	760	760	760	760
	(1650mm without legs) Height	1710	1710	1710	1710	1710
ELECTRICAL SUPPLY		380-415v, 50Hz	380-415v, 50Hz	380-415v, 50Hz	380-415v, 50Hz	380-415v, 50Hz
PHASE		3	3	3	3	3
STARTING CURRENT (A)		8 / 8 / 8	8 / 8 / 8	8 / 8 / 8	8 / 8 / 8	8 / 8 / 8
RUNNING CURRENT (A)	Heating	30.9	34.3	36.1	39.5	43.1
	Cooling	32.4	33.6	34.0	38.1	38.4
FUSE RATING (MCB sizes BS EN 60947-2) - (A)		32 / 20 / 20	32 / 32 / 20	32 / 32 / 20	32 / 32 / 32	32 / 32 / 32
MAINS CABLE No. Cores		4 + earth	4 + earth	4 + earth	4 + earth	4 + earth

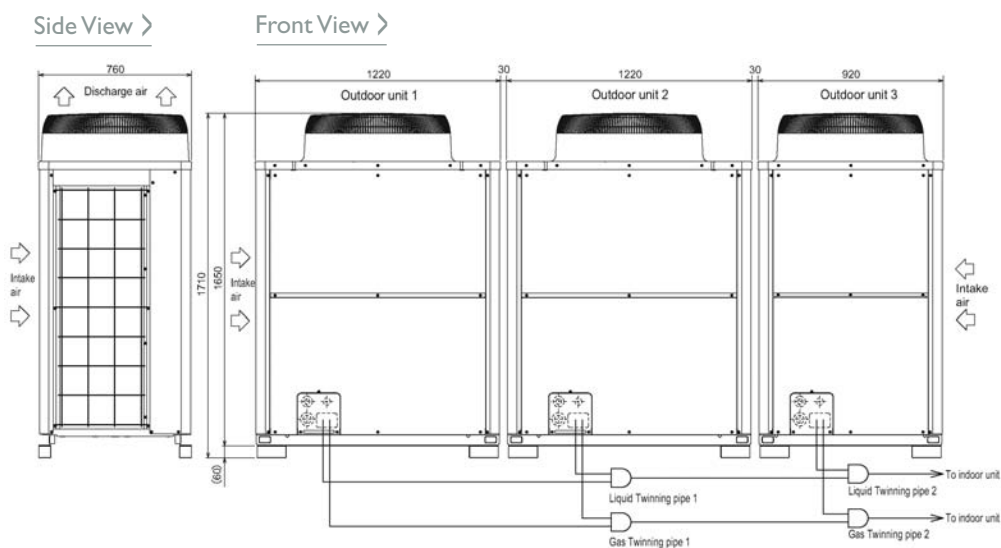
PUHY-EP700-900YSHM-A Piping Restrictions

TOTAL PIPING LENGTH	1000m max
FURTHEST PIPING LENGTH	165m max
FURTHEST PIPING LENGTH AFTER 1st BRANCH	40m max
BETWEEN INDOOR AND OUTDOOR UNITS - HEIGHT	50m max (40m max if outdoor installed below)
BETWEEN INDOOR AND INDOOR UNITS - HEIGHT	15m max

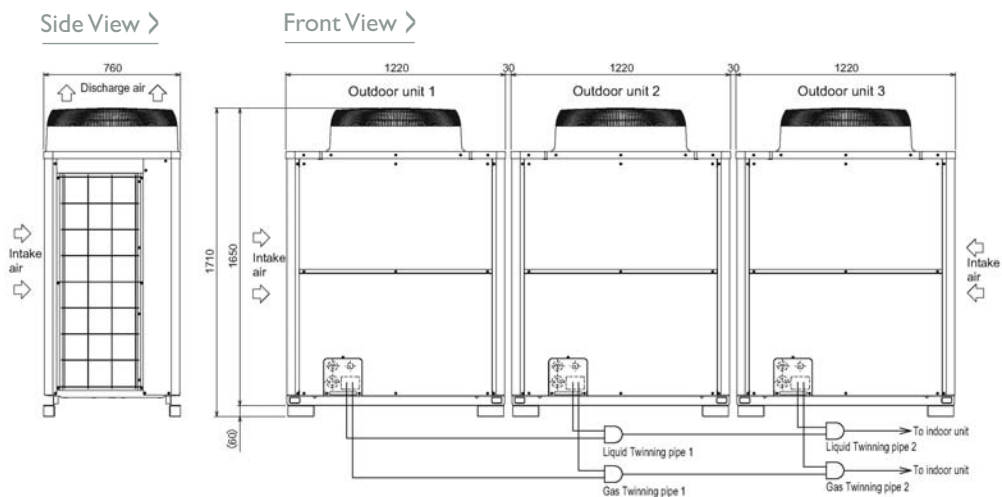
PUHY-EP700, 750YSHM-A



PUHY-EP800, 850YSHM-A



PUHY-EP900YSHM-A



WY Series (8-20hp)

Heat Pump, Water Cooled Condensing Unit

The WY Series has all the benefits of the Y Series using water cooled condensing units. It is also able to produce heat recovery via the water circuit between heat source units, making for a very economical system.

- High COPs possible thanks to increased efficiency and careful control of the system, allowing the largest operational water circuit temperature band ever
- Combining WY with waste heat energy provides unique application solutions
- Up to 24 indoor units can be connected to each condensing unit
- Condensing units can be situated indoors allowing greater design flexibility and no limitation on building size
- Single inverter compressor up to 20hp
- Improved pipe run of 150m with a total system pipe length of up to 300m
- High Sensible Cooling Function - By raising the off coil temperature, a 10% increase in sensible cooling capacity over standard operation is achievable, the result being greater comfort for occupants
- Now able to operate with closed loop ground source water temperatures, bore hole and slinky applications are now possible



Technical Information

WY SERIES HEAT SOURCE UNIT - 8-20hp

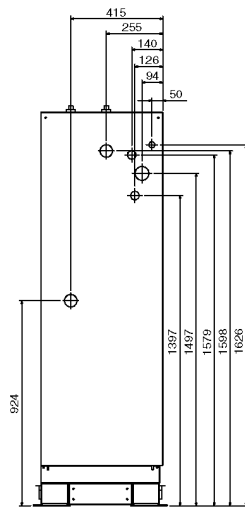
MODEL REFERENCE		PQHY-P200YGM-A	PQHY-P250YGM-A	PQHY-P400YSGM-A	PQHY-P500YSGM-A
CAPACITY (kW)	Heating (nominal)	25.0	31.5	50.0	63.0
	Cooling (nominal)	22.4	28.0	45.0	56.0
POWER INPUT (kW)	Heating (nominal)	4.69	5.80	11.01	13.60
	Cooling (nominal)	4.79	5.95	11.35	15.06
MAX No. OF CONNECTABLE INDOOR UNITS		13	16	22	24
NOISE (dBA)		46	47	50	53
WEIGHT (kg)		272	275	208 + 244	208 + 248
DIMENSIONS (mm)	Width	990	990	1980	1980
	Depth	550	550	550	550
	Height	1800	1800	1800	1800
ELECTRICAL SUPPLY		380-415v, 50Hz	380-415v, 50Hz	380-415v, 50Hz	380-415v, 50Hz
PHASE		3	3	3	3
STARTING CURRENT (A)		8	8	8	8
RUNNING CURRENT (A)	Heating	7.2	8.9	17.0	21.0
	Cooling	7.4	9.1	17.5	23.3
FUSE RATING (BS88) - HRC (A)		20	25	40	50
MAINS CABLE No. Cores		4 + earth	4 + earth	4 + earth	4 + earth

PQHY-P200-500Y(S)GM-A Piping Restrictions

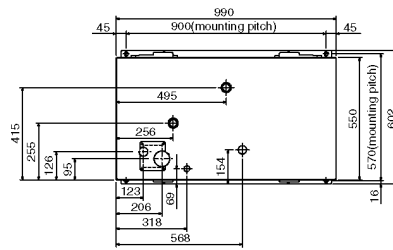
TOTAL PIPING LENGTH	300m max
FURTHEST PIPING LENGTH	150m max
FURTHEST PIPING LENGTH AFTER 1st BRANCH	40m max
BETWEEN INDOOR AND OUTDOOR UNITS - HEIGHT	50m max (40m max if outdoor installed below)
BETWEEN INDOOR AND INDOOR UNITS - HEIGHT	15m max

PQHY-P200, 250YGM-A

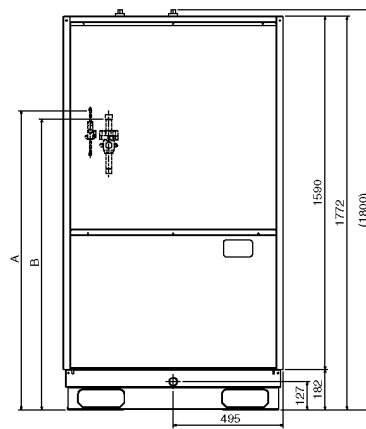
Left Side View >



Upper View >



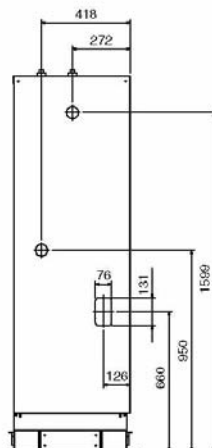
Front View >



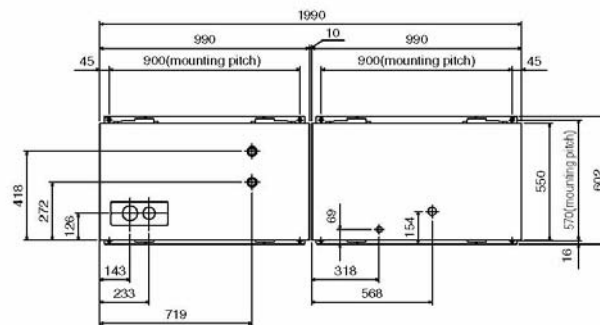
Model	A	B
P200	1346	1289
P250	1346	1299

PQHY-P400, 500YSGM-A

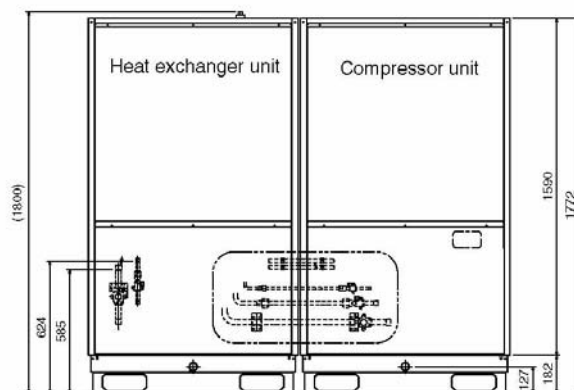
Left Side View >



Upper View >



Front View >



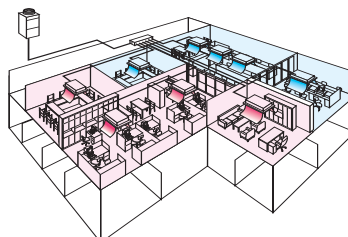
R2 Series Standard (10-16hp)

Simultaneous Heating and Cooling with Heat Recovery Outdoor Unit

Improved for even higher efficiency

Throughout the year, many buildings require cooling in some areas and heating in others - even in adjacent rooms. The outstanding City Multi R2 system meets this requirement by distributing surplus heat from cooling operations (and vice versa) to rooms where it is needed. This efficiency can result in energy savings of up to 30% over conventional systems.

- New higher efficiency inverter technology, with low start currents and wrap around coil for added efficiency
- Up to 40 indoor units connected to each outdoor unit
- Easy to install unique 2-pipe technology means minimal disruption, quicker installation and less connections than a 3 pipe equivalents
- Weight and size reduction compared to previous YGM-A models
- Improved pipe run of 165m with a total system pipe length of up to 600m
- 100% inverter control
- High Sensible Cooling Function - By raising the off coil temperature, a 10% increase in sensible cooling capacity over standard operation is achievable, the result being greater comfort for occupants



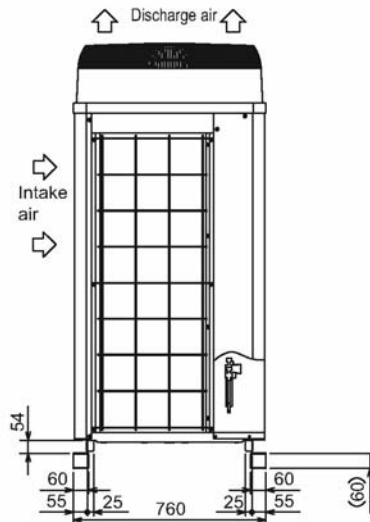
Technical Information

R2 SERIES STANDARD OUTDOOR UNIT 10-16hp					
MODEL REFERENCE		PURY-P250YHM-A	PURY-P300YHM-A	PURY-P350YHM-A	PURY-P400YHM-A
CAPACITY (kW)	Heating (nominal)	31.5	37.5	45.0	50.0
	Cooling (nominal)	28.0	33.5	40.0	45.0
	Heating (UK)	28.7	33.0	39.6	44.0
	Cooling (UK)	26.6	31.5	37.6	42.3
POWER INPUT (kW)	Heating (nominal)	7.83	9.58	12.47	13.71
	Cooling (nominal)	7.73	9.25	12.47	13.74
	Heating (UK)	7.75	9.29	12.10	13.30
	Cooling (UK)	4.79	6.85	9.23	10.17
COP/EER (nominal)		4.02 / 3.62	3.91 / 3.62	3.60 / 3.20	3.64 / 3.27
MAX No. OF CONNECTABLE INDOOR UNITS		25	30	35	40
AIRFLOW (m3/min) High		185	185	225	225
NOISE (dBA)		57	59	60	61
WEIGHT (kg)		235	240	265	265
DIMENSIONS (mm)	Width	920	920	1220	1220
	Depth	760	760	760	760
	Height (1650mm without legs)	1710	1710	1710	1710
ELECTRICAL SUPPLY		380-415v, 50Hz	380-415v, 50Hz	380-415v, 50Hz	380-415v, 50Hz
PHASE		3	3	3	3
STARTING CURRENT (A)		8	8	8	8
RUNNING CURRENT (A)	Heating	12.1	14.8	19.2	21.1
	Cooling	11.9	14.2	19.2	21.2
FUSE RATING (MCB sizes BS EN 60947-2) - (A)		32	32	32	40
MAINS CABLE No. Cores		4 + earth	4 + earth	4 + earth	4 + earth

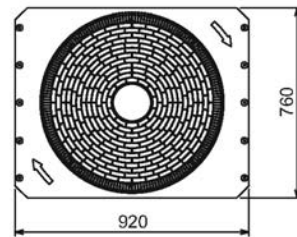
Note: For piping restrictions for PURY-P250-400YHM-A please see page 158

PURY-P250, 300YHM-A

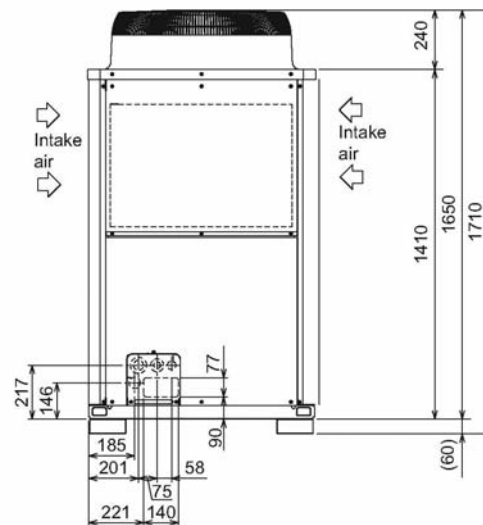
Side View >



Upper View >

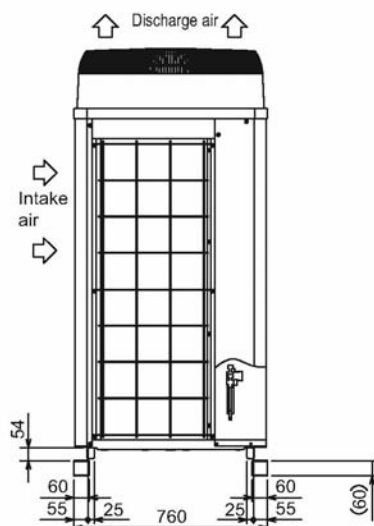


Front View >

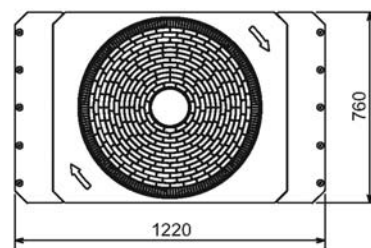


PURY-P350, 400YHM-A

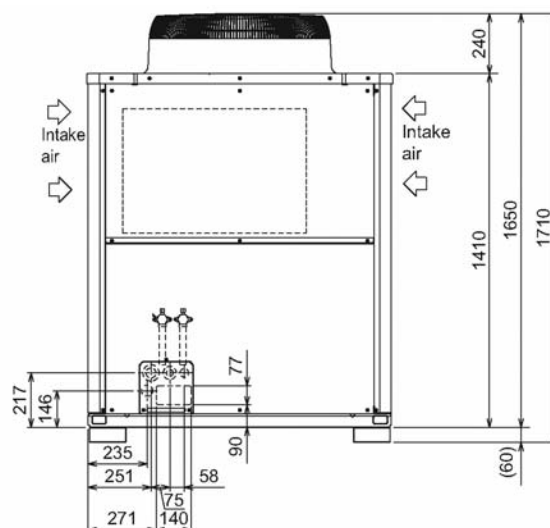
Side View >



Upper View >



Front View >



R2 Series Standard (20-32hp)

Simultaneous Heating and Cooling with Heat Recovery Outdoor Unit

Improved for even higher efficiency

Throughout the year, many buildings require cooling in some areas and heating in others - even in adjacent rooms. The outstanding City Multi R2 system meets this requirement by distributing surplus heat from cooling operations (and vice versa) to rooms where it is needed. This efficiency can result in energy savings of up to 30% over conventional systems.

- New higher efficiency inverter technology, with low start currents and wrap around coil for added efficiency
- Up to 50 indoor units connected to each outdoor unit
- Easy to install unique 2-pipe technology means minimal disruption, quicker installation and less connections than a 3 pipe equivalents
- Weight and size reduction compared to previous YGM-A models
- Improved pipe run of 165m with a total system pipe length of up to 950m
- 100% inverter control
- High Sensible Cooling Function - By raising the off coil temperature, a 10% increase in sensible cooling capacity over standard operation is achievable, the result being greater comfort for occupants

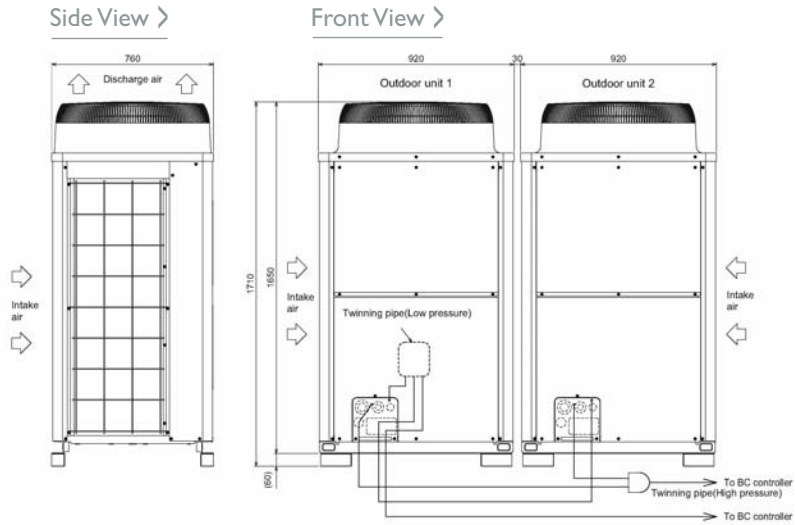


Technical Information

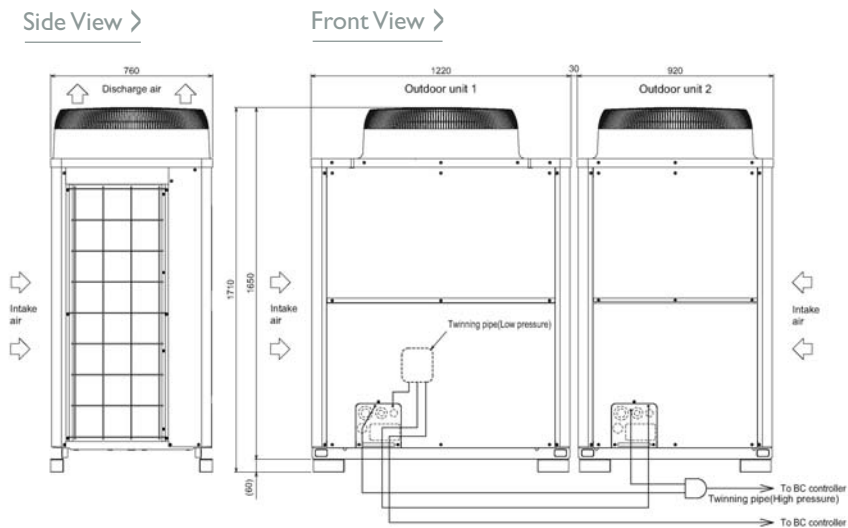
R2 SERIES STANDARD OUTDOOR UNIT 20-32hp								
MODEL REFERENCE		PURY-P500YSHM-A	PURY-P550YSHM-A	PURY-P600YSHM-A	PURY-P650YSHM-A	PURY-P700YSHM-A	PURY-P750YSHM-A	PURY-P800YSHM-A
CAPACITY (kW)	Heating (nominal)	63.0	69.0	76.5	81.5	88.0	95.0	100.0
	Cooling (nominal)	56.0	63.0	69.0	73.0	80.0	85.0	90.0
	Heating (UK)	54.8	60.0	66.6	70.9	75.7	81.7	86.0
	Cooling (UK)	51.5	58.0	63.5	67.2	73.6	78.2	82.8
POWER INPUT (kW)	Heating (nominal)	16.79	18.81	20.83	22.55	24.30	26.36	27.64
	Cooling (nominal)	16.75	18.68	19.64	22.80	24.72	27.86	29.75
	Heating (UK)	15.28	17.12	18.96	20.52	22.60	24.51	25.71
	Cooling (UK)	11.73	13.08	13.75	15.96	17.80	20.06	21.42
COP/EER (nominal)		3.75 / 3.34	3.66 / 3.37	3.67 / 3.51	3.61 / 3.20	3.62 / 3.23	3.60 / 3.05	3.61 / 3.02
MAX No. OF CONNECTABLE INDOOR UNITS		50	50	50	50	50	50	50
AIRFLOW (m3/min)	High	185 / 185	185 / 185	185 / 185	225 / 185	225 / 185	225 / 225	225 / 225
NOISE (dBA)		60	61	62	62.5	63	63.5	64
WEIGHT (kg)		235 + 235	240 + 235	240 + 240	265 + 240	265 + 240	265 + 265	265 + 265
DIMENSIONS (mm)	Width	920 + 920	920 + 920	920 + 920	1220 + 920	1220 + 920	1220 + 1220	1220 + 1220
	Depth	760	760	760	760	760	760	760
	Height (1650mm without legs)	1710	1710	1710	1710	1710	1710	1710
ELECTRICAL SUPPLY		380-415v, 50Hz	380-415v, 50Hz	380-415v, 50Hz	380-415v, 50Hz	380-415v, 50Hz	380-415v, 50Hz	380-415v, 50Hz
PHASE		3	3	3	3	3	3	3
STARTING CURRENT (A)		8 / 8	8 / 8	8 / 8	8 / 8	8 / 8	8 / 8	8 / 8
RUNNING CURRENT (A)	Heating	25.9	29.0	32.1	34.8	37.5	40.7	42.7
	Cooling	25.8	28.8	30.3	35.2	38.2	43.0	45.9
FUSE RATING (MCB sizes BS EN 60947-2) - (A)		32 / 32	32 / 32	32 / 32	32 / 32	40 / 32	40 / 32	40 / 40
MAINS CABLE No. Cores		4 + earth	4 + earth	4 + earth	4 + earth	4 + earth	4 + earth	4 + earth

Note: For piping restrictions for PURY-P500-800YSHM-A please see page 158

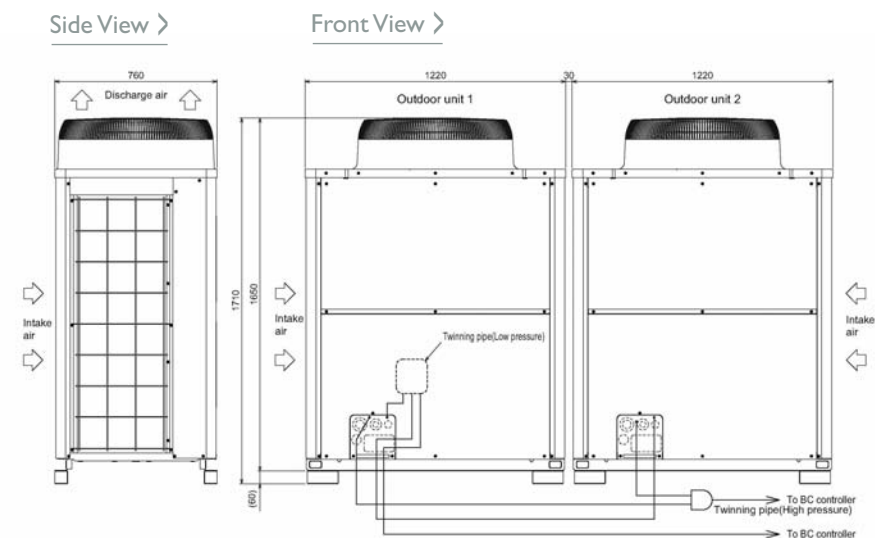
PURY-P500, 550, 600YSHM-A



PURY-P650, 700YSHM-A



PURY-P750, 800YSHM-A



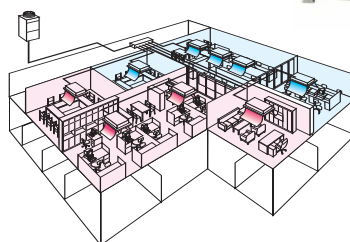
R2 Series High COP (8-24hp)

Simultaneous Heating and Cooling with Heat Recovery Outdoor Unit

Improved for even higher efficiency

Throughout the year, many buildings require cooling in some areas and heating in others - even in adjacent rooms. The outstanding City Multi R2 system meets this requirement by distributing surplus heat from cooling operations (and vice versa) to rooms where it is needed. This efficiency can result in energy savings of up to 30% over conventional systems.

- Highest ever COP's / EER's due to new high efficiency inverter technology and wrap around coil for added efficiency
- Up to 50 indoor units connected to each outdoor unit
- Easy to install unique 2-pipe technology means minimal disruption, quicker installation and less connections than a 3 pipe equivalents
- Weight and size reduction compared to previous YGM-A models
- Improved pipe run of 165m with a total system pipe length of up to 800m
- 100% inverter control with low start currents
- High Sensible Cooling Function - By raising the off coil temperature, a 10% increase in sensible cooling capacity over standard operation is achievable, the result being greater comfort for occupants



Technical Information

R2 SERIES HIGH COP OUTDOOR UNIT 8-24hp

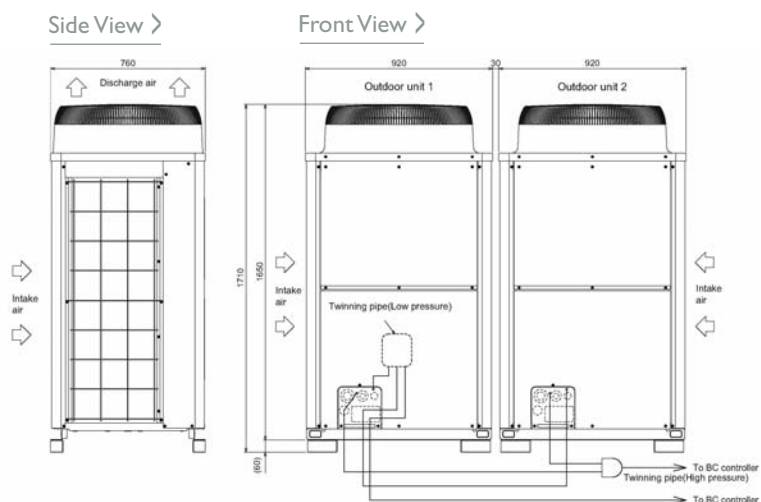
MODEL REFERENCE		PURY-EP200YHM-A	PURY-EP300YHM-A	PURY-EP400YSHM-A	PURY-EP450YSHM-A	PURY-EP500YSHM-A	PURY-EP550YSHM-A	PURY-EP600YSHM-A
CAPACITY (kW)	Heating (nominal)	25.0	37.5	50.0	56.0	63.0	69.0	76.5
	Cooling (nominal)	22.4	33.5	45.0	50.0	56.0	63.0	69.0
	Heating (UK)	23.0	33.0	44.0	48.7	54.8	60.0	66.6
	Cooling (UK)	21.3	31.5	42.3	46.0	51.5	58.0	63.5
POWER INPUT (kW)	Heating (nominal)	5.81	9.37	11.73	13.77	15.33	17.37	19.12
	Cooling (nominal)	5.23	8.33	10.57	13.09	13.70	16.38	17.00
	Heating (UK)	5.75	9.09	11.38	12.53	13.95	15.81	17.40
	Cooling (UK)	3.24	6.16	7.82	9.16	9.59	11.47	11.90
COP/EER (nominal)		4.30 / 4.28	4.00 / 4.02	4.26 / 4.25	4.06 / 3.81	4.10 / 4.08	3.97 / 3.84	4.00 / 4.05
MAX No. OF CONNECTABLE INDOOR UNITS		20	30	40	45	50	50	50
AIRFLOW (m3/min)	High	185	225	185 / 185	185 / 185	225 / 185	225 / 185	225 / 225
NOISE (dBA)		57	60	60	60	62	62	63
WEIGHT (kg)		235	265	235 + 235	235 + 235	265 + 235	265 + 235	265 + 265
DIMENSIONS (mm)	Width	920	1220	920 + 920	920 + 920	1220 + 920	1220 + 920	1220 + 1220
	Depth	760	760	760	760	760	760	760
	Height (1650mm without legs)	1710	1710	1710	1710	1710	1710	1710
ELECTRICAL SUPPLY		380-415v, 50Hz	380-415v, 50Hz	380-415v, 50Hz	380-415v, 50Hz	380-415v, 50Hz	380-415v, 50Hz	380-415v, 50Hz
PHASE		3	3	3	3	3	3	3
STARTING CURRENT (A)		8	8	8 / 8	8 / 8	8 / 8	8 / 8	8 / 8
RUNNING CURRENT (A)	Heating	8.9	14.4	18.1	21.2	23.6	26.8	29.5
	Cooling	8.0	12.8	16.3	20.2	21.1	25.3	26.2
FUSE RATING (MCB sizes BS EN 60947-2) - (A)		20	32	20 / 20	32 / 20	32 / 20	32 / 32	32 / 32
MAINS CABLE No. Cores		4 + earth	4 + earth	4 + earth	4 + earth	4 + earth	4 + earth	4 + earth

Note: For piping restrictions for PURY-EP200-600Y(S)HM-A please see page 158

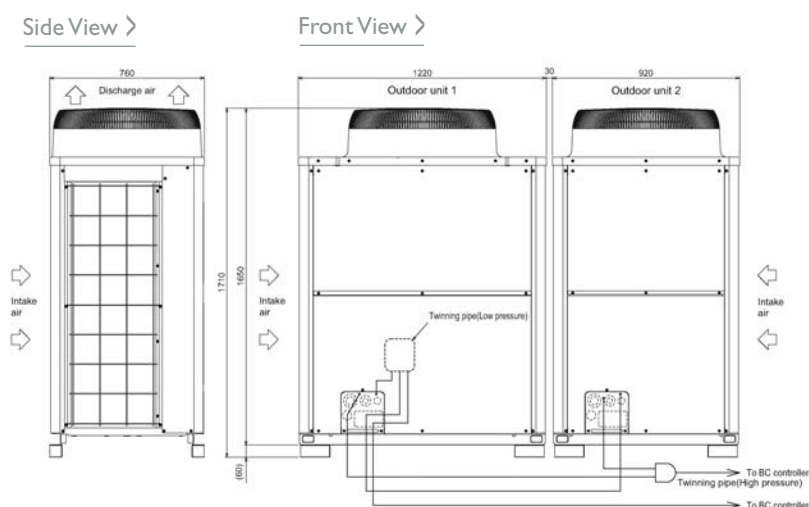
PURY-EP200, 300YHM-A

PURY-EP200YHM-A schematic is the same as PURY-P250, 300YHM-A on page 153
 PURY-EP300YHM-A schematic is the same as PURY-P350, 400YHM-A on page 153

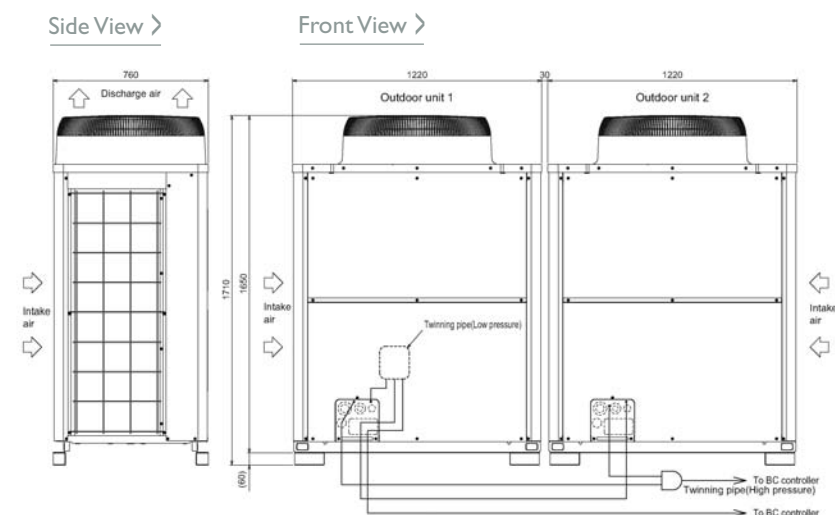
PURY-EP400, 450YSHM-A



PURY-EP500, 550YSHM-A



PURY-EP600YSHM-A



R2 Series Piping Restrictions

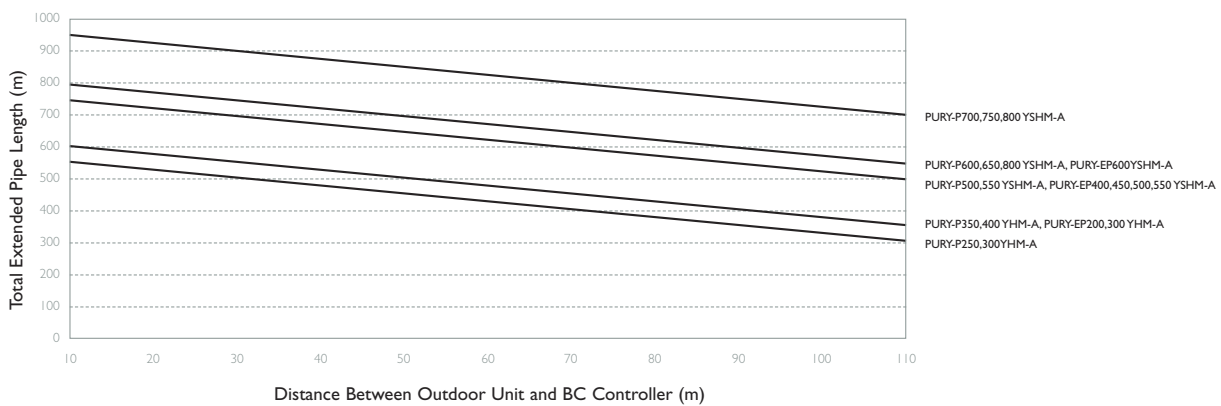
R2 SERIES PIPING RESTRICTIONS

TABLE I: TOTAL PIPE LENGTH

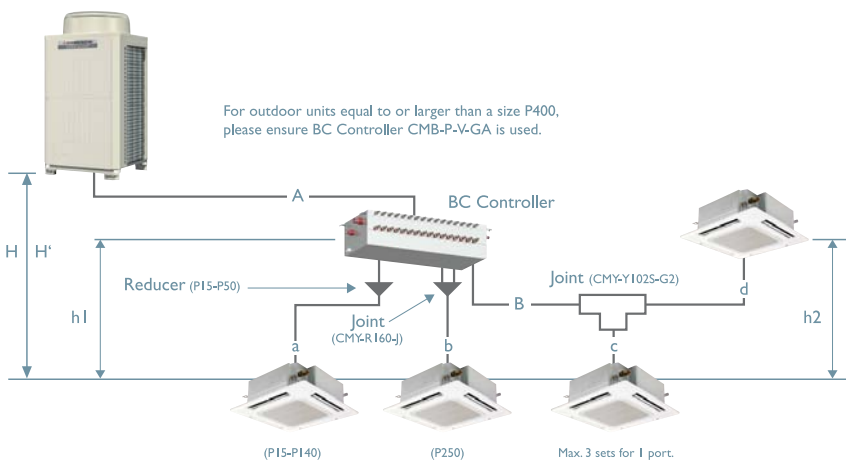
OUTDOOR MODEL	MAX LENGTH
P250, P300	550m*1
P350, P400, EP200, EP300	600m*1
P500, P550, EP400, EP450, EP500, EP550	750m*1
P600, P650, EP600	800m*1
P700, P750, P800	950m*1

*1 Please refer to Graph 1

GRAPH 1: TOTAL PIPING LENGTH RESTRICTIONS



R2 SERIES PIPING RESTRICTIONS

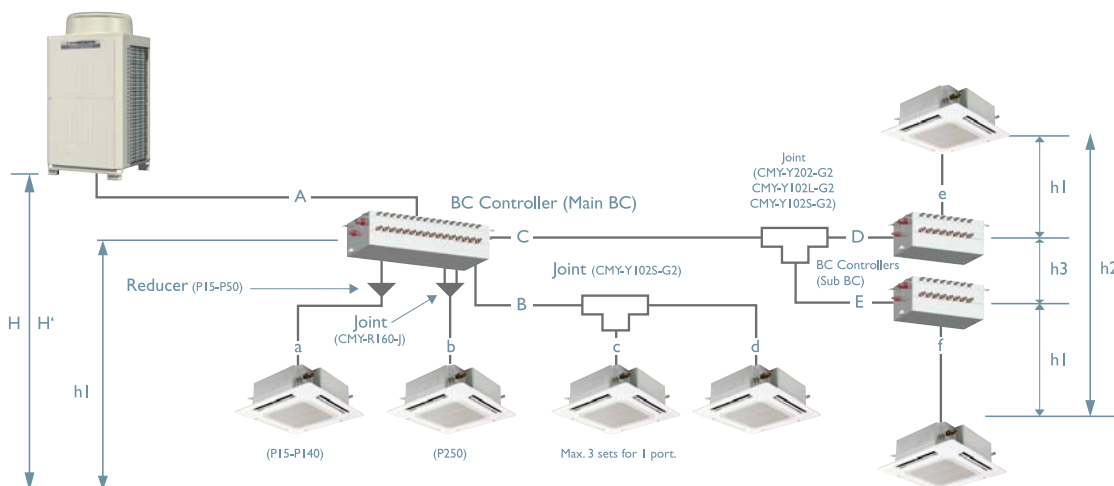


R2 SERIES PIPING RESTRICTIONS

PIPING LENGTH (1 BC CONTROLLER, NO SUB BC CONTROLLER)

ITEM	PIPE SECTION	MAX LENGTH
Total Piping Length	A+B+a+b+c+d	(See Table I)
Furthest Piping Length	A+B+d	165m
Length Between OU and BC	A	110m*1
Length Between Furthest IU and BC	B+d	60m*2 (40m)
Height Between OU and IU (OU above IU)	H	50m
Height Between OU and IU (OU below IU)	H'	40m
Height Between IU and BC	h1	15m
Height Between IU and IU	h2	15m

*1 Please refer to Graph 1. *2 Height difference between BC controller and furthest indoor unit is zero.

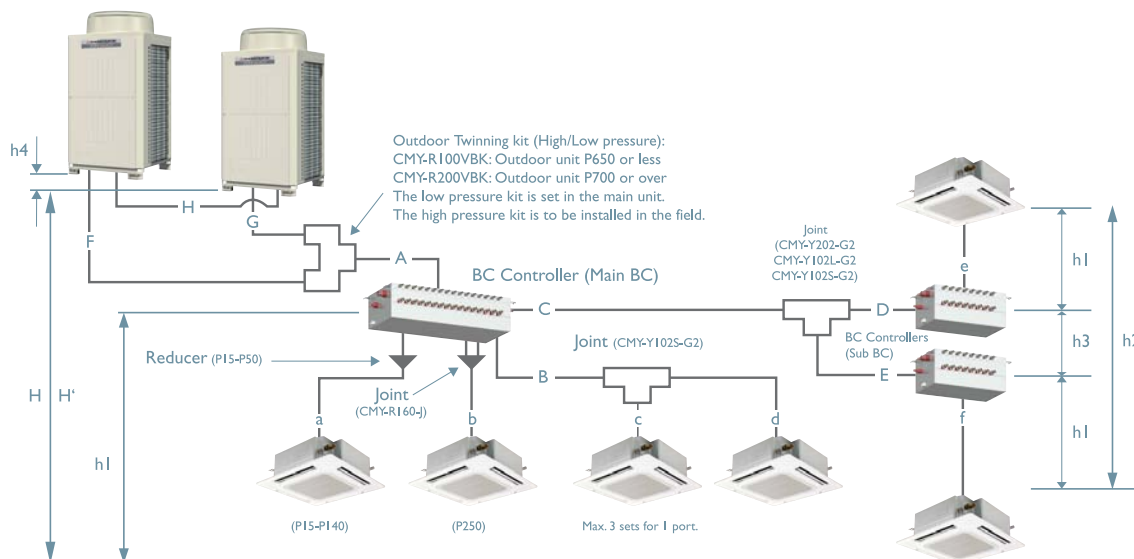


R2 SERIES PIPING RESTRICTIONS

PIPING LENGTH (>1 BC CONTROLLER FOR 1 OUTDOOR UNIT)

ITEM	PIPE SECTION	MAX LENGTH
Total Piping Length	$A+B+C+D+E+a+b+c+d+e+f$	(See Table I)
Furthest Piping Length	$A+C+E+f$	165m
Length Between OU and BC	A	110m*1
Length Between Furthest IU and BC	$B+d$ or $C+D+e$ or $C+E+f$	60m*2 (40m)
Height Between OU and IU (OU above IU)	H	50m
Height Between OU and IU (OU below IU)	H'	40m
Height Between IU and BC	h1	15m
Height Between IU and IU	h2	15m
Height Between BC (Main or Sub) and BC (Sub)	h3	15m

*1 Please refer to Graph 1. *2 Height difference between BC controller and furthest indoor unit is zero.



R2 SERIES PIPING RESTRICTIONS

PIPING LENGTH (>1 BC CONTROLLER FOR 2 OUTDOOR UNITS)

ITEM	PIPE SECTION	MAX LENGTH
Total Piping Length	$F+G+A+B+C+D+E+a+b+c+d+e+f$	(See Table I)
Furthest Piping Length	$F(G)+A+C+E+f$	165m
Length Between OU and BC	$F(G)+A$	110m*1
Length Between Furthest IU and BC	$B+d$ or $C+D+e$ or $C+E+f$	60m*2 (40m)
Height Between OU and IU (OU above IU)	H	50m
Height Between OU and IU (OU below IU)	H'	40m
Height Between IU and BC	h1	15m
Height Between IU and IU	h2	15m
Height Between BC (Main or Sub) and BC (Sub)	h3	15m
Length Between Main OU and Sub OU	$F+G$ or H	5m
Height Between Main OU and Sub OU	h4	0.1m

*1 Please refer to Graph 1. *2 Height difference between BC controller and furthest indoor unit is zero.

WR2 Series (8-20hp)

Water Cooled Condensing Unit

Simultaneous Heating and Cooling with Double Heat Recovery

The WR2 system has double heat recovery potential, making this system very economical. Not only does it produce heat recovery from indoor units on the same refrigerant circuit, it also produces heat recovery via the water circuit between heat source units.

- All the benefits of the R2 Series with water cooled condensing units, using a single inverter compressor
- High COPs possible thanks to increased efficiency and careful control of the system, allowing the largest operational water circuit temperature band ever
- Unique 2-pipe refrigerant circuit allows simultaneous heating and cooling plus heat recovery between indoor units as with the R2 system
- Total building heat recovery made possible by exchanging energy in both refrigerant and water circuits
- Combining WR2 with waste heat energy provides unique application solutions
- Condensing units can be situated indoors allowing greater design flexibility and no limitation on building size
- Single inverter compressor up to 20hp
- Improved pipe run of 150m with a total system pipe length of up to 400m
- High Sensible Cooling Function - By raising the off coil temperature, a 10% increase in sensible cooling capacity over standard operation is achievable, the result being greater comfort for occupants
- Now able to operate with closed loop ground source water temperatures, bore hole and slinky applications are now possible



Technical Information

WR2 SERIES HEAT SOURCE UNIT - 8-20hp

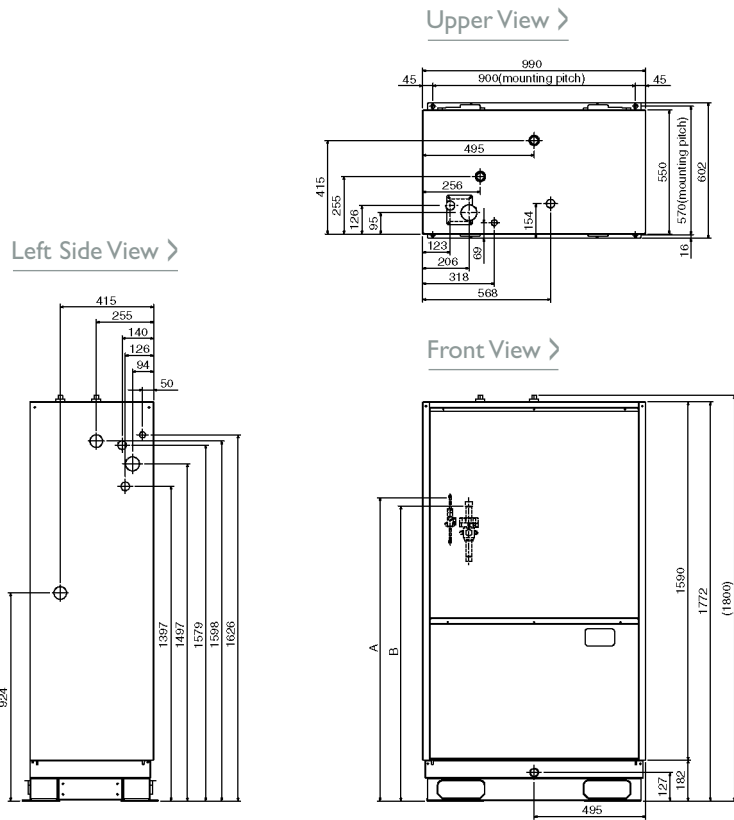
MODEL REFERENCE		PQRY-P200YGM-A	PQRY-P250YGM-A	PQRY-P400YSGM-A	PQRY-P500YSGM-A
CAPACITY (kW)	Heating (nominal)	25.0	31.5	50.0	63.0
	Cooling (nominal)	22.4	28.0	45.0	56.0
POWER INPUT (kW)	Heating (nominal)	4.69	5.80	11.01	13.60
	Cooling (nominal)	4.79	5.95	11.35	15.06
MAX No. OF CONNECTABLE INDOOR UNITS		15	19	24	24
NOISE (dBA)		46	47	50	53
WEIGHT (kg)		263	266	208 + 232	208 + 236
DIMENSIONS (mm)	Width	990	990	1980	1980
	Depth	550	550	550	550
	Height	1800	1800	1800	1800
ELECTRICAL SUPPLY		380-415v, 50Hz	380-415v, 50Hz	380-415v, 50Hz	380-415v, 50Hz
PHASE		3	3	3	3
STARTING CURRENT (A)		8	8	8	8
RUNNING CURRENT (A)	Heating	7.2	8.9	17.0	21.0
	Cooling	7.4	9.1	17.5	23.3
FUSE RATING (BS88) - HRC (A)		20	25	40	50
MAINS CABLE No. Cores		4 + earth	4 + earth	4 + earth	4 + earth

PQRY-P200-500Y(S)GM-A Piping Restrictions

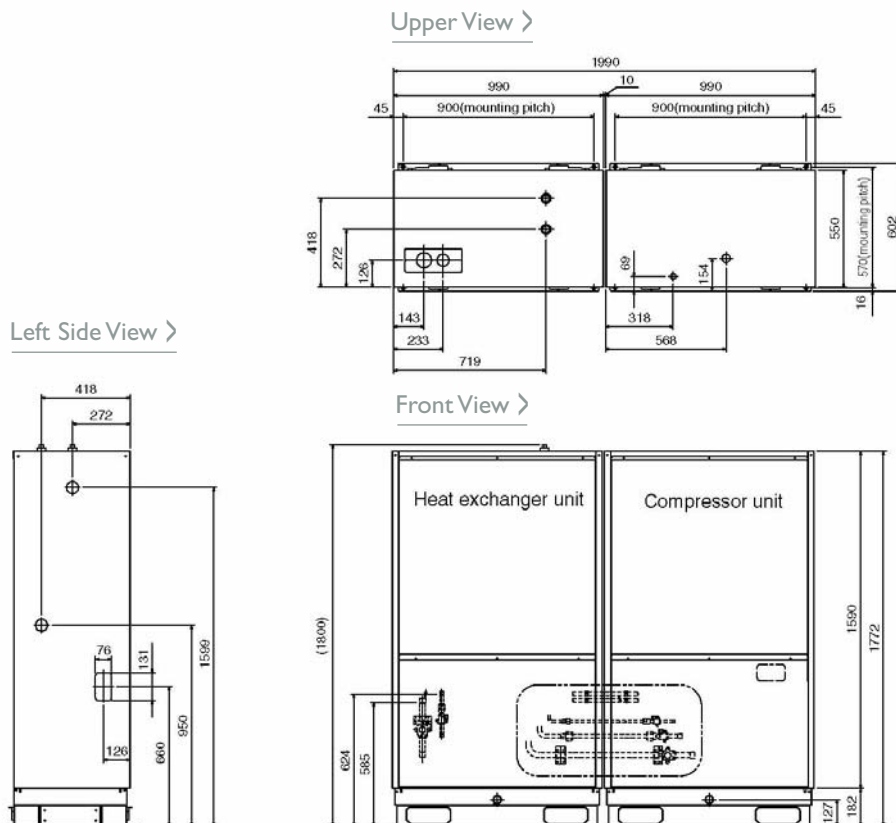
TOTAL PIPING LENGTH	400m max ^{*3} (300m)
FURTHEST PIPING LENGTH	150m max
BETWEEN OUTDOOR AND BC CONTROLLER (MASTER) - LENGTH	110m max ^{*4} (70m)
BETWEEN INDOOR AND BC CONTROLLER (MASTER/SLAVE) - LENGTH	60m max ^{*5} (40m)
BETWEEN INDOOR AND OUTDOOR - HEIGHT	50m max (40m) ^{*1}
BETWEEN INDOOR AND INDOOR - HEIGHT	15m max (10m) ^{*2}
BETWEEN INDOOR AND BC CONTROLLER (MASTER/SLAVE) - HEIGHT	15m max
BETWEEN INDOOR (MASTER) AND INDOOR (SLAVE) - HEIGHT	15m max (10m) ^{*2}

^{*1} When O/U is below indoor ^{*2} In case of P200, P250 indoor unit ^{*3} Distance between outdoor unit and BC Controller is 70m or less ^{*4} Total piping length is 300m or less
^{*5} Height difference between the Master BC Controller and furthest indoor unit is zero

PQRY-P200, 250YGM-A



PQRY-P400, 500YSGM-A



PFD-P-VM-E (10/20hp)

Heat Pump Close Control System

Mitsubishi Electric's new Close Control System is specifically designed for computer rooms, laboratories etc, where a need for high sensible cooling and close control of temperature and humidity is required. Because of the need for close control 24 hours a day, 365 days a year, a newly developed inverter driven compressor has been incorporated into the outdoor unit, maximising the energy efficiency of the PFD series.

It is also able to be connected to a computer network using our G50 controller, in order to monitor and provide remote email alarms.

- High sensible cooling
- Newly developed inverter driven compressor
- Energy efficient with high COP's
- Close control of temperature, $\pm 1^{\circ}\text{C}$
- Easy to install - no service space needed at the rear of the unit
- Optional third party humidifier available
- Quick recovery following power failure
- Return or discharge air temperature control

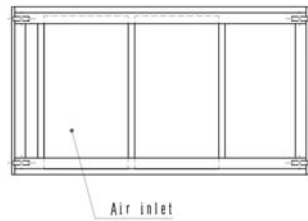


Technical Information

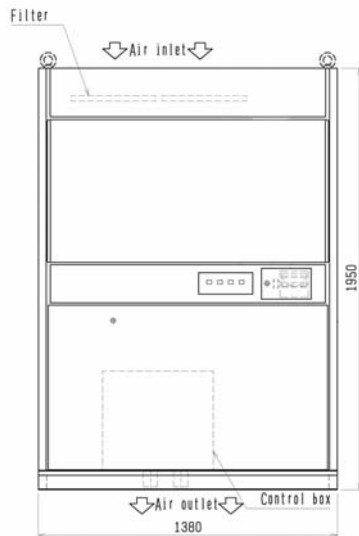
PFD-P-VM-E - INDOOR UNIT				PUHY-P-YHM-A / PQHY-P-YGM-A - OUTDOOR UNITS			
MODEL REFERENCE		PFD-P250VM-E	PFD-P500VM-E	PUHY-P250YHM-A	PQHY-P250YGM-A	PUHY-P250YHM-A x2	PQHY-P250YGM-A x2
CAPACITY (kW)	Heating (nominal)	31.5	63.0	31.5	31.5	63.0	63.0
	Cooling (nominal)	28.0	56.0	28.0	28.0	56.0	56.0
	Heating (UK)	29.1	55.4	28.7	N/A	54.8	N/A
	Cooling (UK)	26.6	51.5	26.6	N/A	51.5	N/A
SHF		0.93	0.93	N/A	N/A	N/A	N/A
POWER INPUT (kW)	Heating (nominal)	2.5	5.0	6.6	5.6	6.6 / 6.6	5.6 / 5.6
	Cooling (nominal)	2.5	5.0	6.8	5.9	6.8 / 6.8	5.9 / 5.9
	Heating (UK)	2.15	4.3	6.55	N/A	6.55 / 6.55	N/A
	Cooling (UK)	2.15	4.3	4.2	N/A	4.2 / 4.2	N/A
AIRFLOW (m3/min)		160	320	185	N/A	185 / 185	N/A
EXTERNAL STATIC PRESSURE (Pa)		120	120	N/A	N/A	N/A	N/A
PIPE SIZE mm(in)	Gas	22.2 (7/8")	28.58 (1 1/8")	22.2 (7/8")	22.2 (7/8")	28.58 (1 1/8")	28.58 (1 1/8")
	Liquid	9.52 (3/8")	15.88 (5/8")	9.52 (3/8")	9.52 (3/8")	15.88 (5/8")	15.88 (5/8")
NOISE (dBA)		59	63	57	47	57 / 57	47 / 47
WEIGHT (kg)		380	520	200	275	200 + 200	275 + 275
DIMENSIONS (mm)	Width	1380	1980	920	990	920 + 920	990 + 990
	Depth	780	780	760	550	760	550
	Height	1950	1950	1710	1800	1710	1800
ELECTRICAL SUPPLY		380-415v, 50Hz	380-415v, 50Hz	380-415v, 50Hz	380-415v, 50Hz	380-415v, 50Hz	380-415v, 50Hz
PHASE		3	3	3	3	3	3
STARTING CURRENT (A) Inverter / DOL		47	68	8	8	8 / 8	8 / 8
RUNNING CURRENT (A)	Heating	4.9	8.7	10.2	8.5	10.2 / 10.2	8.5 / 8.5
	Cooling	4.9	8.7	10.5	9.0	10.5 / 10.5	9.0 / 9.0
FUSE RATING (BS88) - HRC (A)		16	20	32	25	32 / 32	25 / 25
MAINS CABLE No. Cores		4 + earth	4 + earth	4 + earth	4 + earth	4 + earth	4 + earth
PUHY-P-YHM-A / PQHY-P-YGM-A Piping Restrictions							
TOTAL PIPING LENGTH			165m max (150m for PQHY)				
BETWEEN INDOOR AND OUTDOOR UNITS - HEIGHT			50m max (40m max if outdoor installed below)				

PFD-P250VM-E

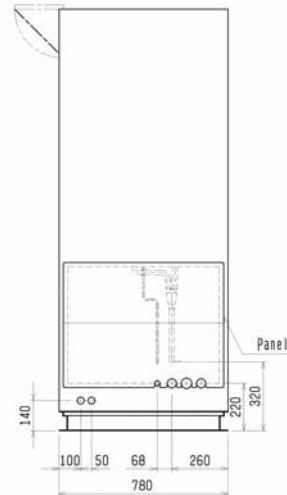
Upper View >



Front View >

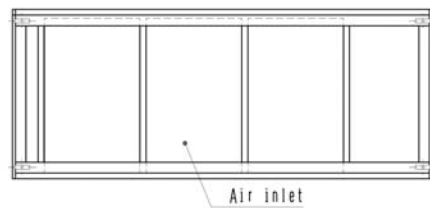


Side View >

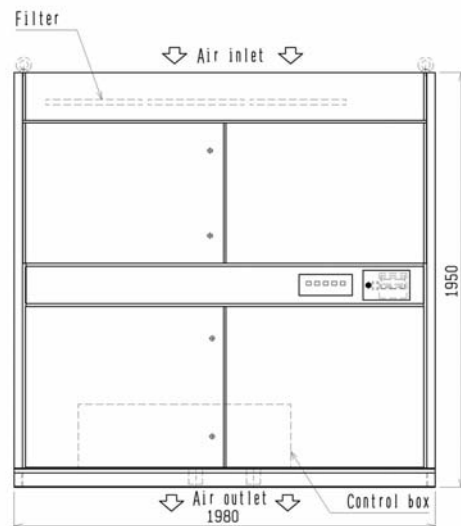


PFD-P500VM-E

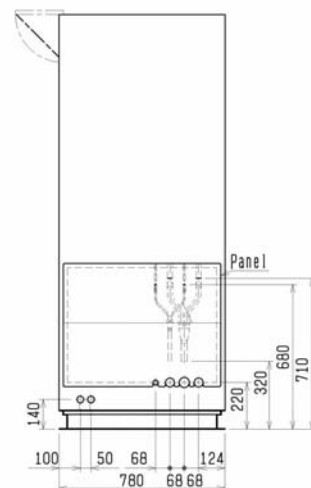
Upper View >



Front View >



Side View >



PLFY-P-VBM-E

2, 3 and 4-Way Blow Ceiling Cassette Indoor Unit

Power cassettes offer 72 different airflow patterns, with the ability to handle a multitude of ceiling applications up to 4.2 meters in height. The easy to install, slim unit is ideal for maintaining constant temperatures, thanks to adjustable vanes that allow users to precisely direct air where it's needed.

The Mitsubishi Electric airflow control mechanism has been improved and uses wider vanes so that the unit reduces drafts and smudging, whilst a high performance drain pump on the drain lift mechanism allows drain water to be lifted up to 850mm from the ceiling surface.

- Handy corner pocket design simplifies maintenance
- Airflow controllable for ceiling heights up to 4.2m, with automatic adjustment of fan speed
- Reduced draft air distribution, with independent vane control
- Drain pump as standard, 850mm from drain pan
- Filter lowering operation down to 4m (optional PLP-6BAJ grille required)
- Optional 'I See Sensor' for energy saving and smooth temperature control throughout the room
- For further information on the features of this cassette, please see page 60



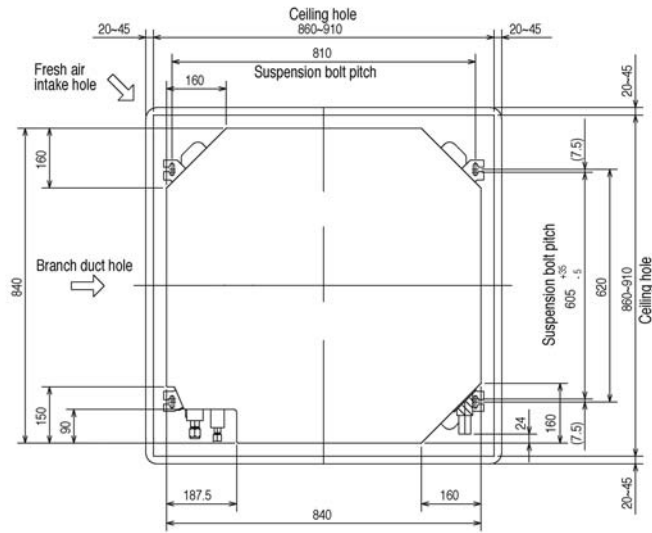
Technical Information

PLFY-P-VBM-E - INDOOR UNIT

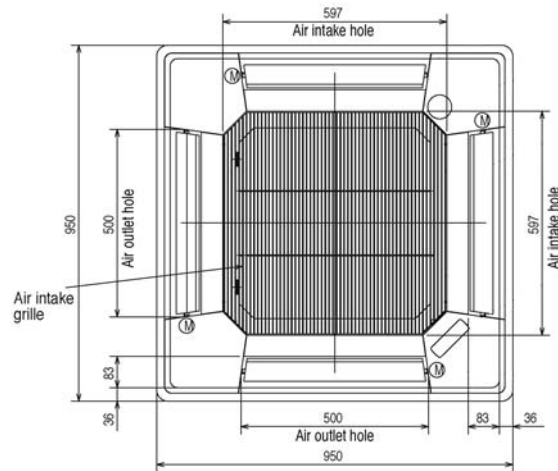
MODEL REFERENCE		PLFY-P32VBM-E	PLFY-P40VBM-E	PLFY-P50VBM-E	PLFY-P63VBM-E	PLFY-P80VBM-E	PLFY-P100VBM-E	PLFY-P125VBM-E
CAPACITY (kW)	Heating (nominal)	4.0	5.0	6.3	8.0	10.0	12.5	16.0
	Cooling (nominal)	3.6	4.5	5.6	7.1	9.0	11.2	14.0
	Heating (UK)	3.7	4.6	5.8	7.4	9.2	11.6	14.8
	Cooling (UK)	3.2	4.0	5.0	6.3	8.0	10.0	12.5
	High Sensible Cooling (UK)	2.6	3.3	4.1	5.2	6.5	8.1	10.2
SHF	(UK)	0.84	0.83	0.76	0.75	0.73	0.73	0.71
High Sensible	(UK)	0.96	0.91	0.83	0.79	0.78	0.79	0.74
POWER INPUT (kW)	Heating (nominal)	0.02	0.03	0.03	0.04	0.06	0.14	0.15
	Cooling (nominal)	0.03	0.04	0.04	0.05	0.07	0.15	0.16
AIRFLOW (m3/min)	Lo-Mi1-Mi2-Hi	11-12-13-14	12-13-14-16	12-13-14-16	14-15-16-18	16-18-20-22	21-24-27-29	22-25-28-30
NOISE (dBA)	Lo-Mi1-Mi2-Hi	27-28-29-31	27-28-30-31	27-28-30-31	28-29-30-32	30-32-35-37	34-37-39-41	35-38-41-43
WEIGHT (kg)	(Grille)	22(6)	22(6)	22(6)	23(6)	23(6)	27(6)	27(6)
DIMENSIONS (mm)	Width (Grille)	840(950)	840(950)	840(950)	840(950)	840(950)	840(950)	840(950)
	Depth (Grille)	840(950)	840(950)	840(950)	840(950)	840(950)	840(950)	840(950)
	Height (Grille)	258(35)	258(35)	258(35)	258(35)	258(35)	298(35)	298(35)
ELECTRICAL SUPPLY		220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz
PHASE		Single	Single	Single	Single	Single	Single	Single
RUNNING CURRENT (A)	Heating	0.14	0.22	0.22	0.29	0.43	0.94	1.00
	Cooling	0.22	0.29	0.29	0.36	0.51	1.00	1.07
FUSE RATING (BS88) - HRC (A)		6	6	6	6	6	6	6
MAINS CABLE No. Cores		3	3	3	3	3	3	3
GRILLE MODEL REFERENCE		PLP-6BA	PLP-6BA	PLP-6BA	PLP-6BA	PLP-6BA	PLP-6BA	PLP-6BA

PLFY-P32, 40, 50, 63, 80, 100, 125VBM-E

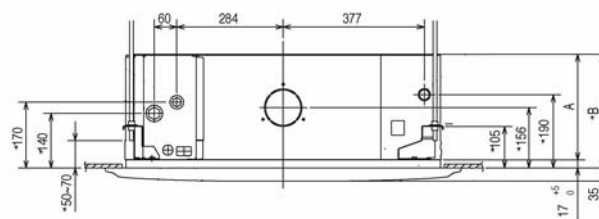
Upper View >



Lower View >



Side View >



MODELS	A	B
PLFY-P32-80VBM-E	241	258
PLFY-P100-125VBM-E	281	298

PLFY-P-VCM-E

600x600 4-Way Blow Ceiling Cassette Indoor Unit

The compact size of this unit is ideal for 600x600mm ceilings and with a depth of 208mm, this lightweight unit makes installation a breeze. This unit also comes complete with a long life filter that will last for approximately 2,500 hours.

- Compact size for handy installation and easy maintenance
- Only 208mm high
- Fresh air duct facility



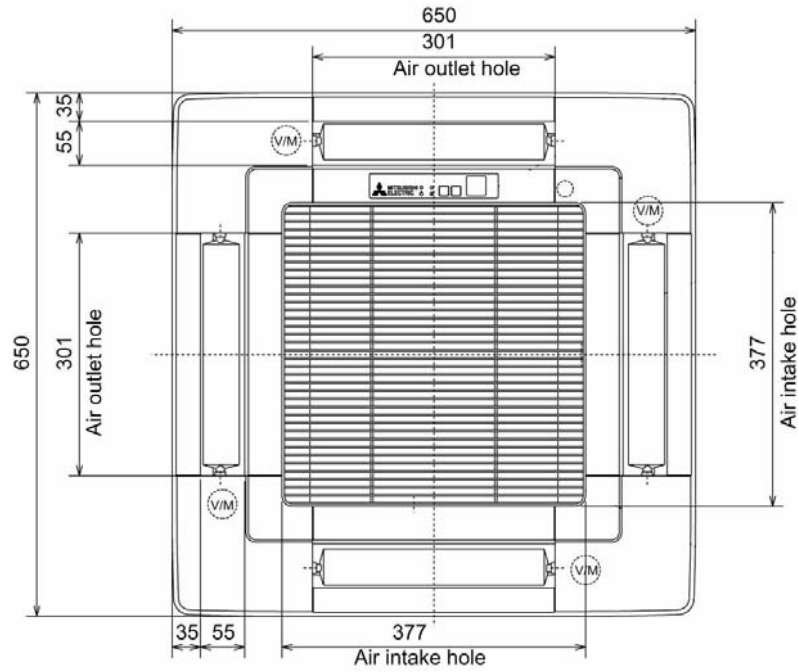
Technical Information

PLFY-P-VCM-E - INDOOR UNIT

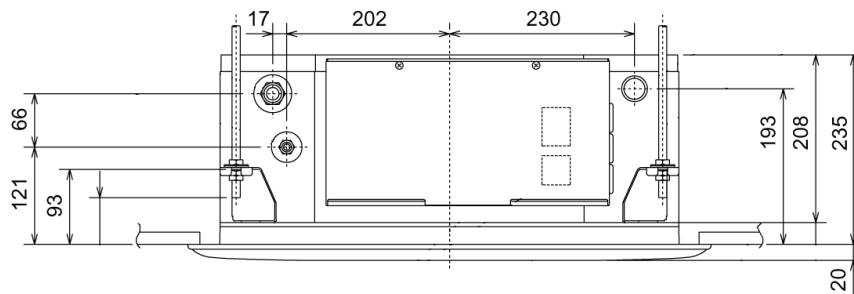
MODEL REFERENCE		PLFY-P20VCM-E	PLFY-P25VCM-E	PLFY-P32VCM-E	PLFY-P40VCM-E
CAPACITY (kW)	Heating (nominal)	2.5	3.2	4.0	5.0
	Cooling (nominal)	2.2	2.8	3.6	4.5
	Heating (UK)	2.3	3.0	3.7	4.6
	Cooling (UK)	2.1	2.6	3.4	4.3
High Sensible	Cooling (UK)	1.6	2.0	2.6	3.3
SHF	(UK)	0.86	0.81	0.76	0.70
High Sensible	(UK)	1.00	0.90	0.85	0.76
POWER INPUT (kW)	Heating (nominal)	0.05	0.05	0.06	0.06
	Cooling (nominal)	0.05	0.05	0.06	0.06
AIRFLOW (m3/min)	Lo-Mi-Hi	8-9-10	8-9-10	8-9-11	8-9-11
NOISE (dBA)	Lo-Mi-Hi	28-31-35	28-31-37	29-33-38	30-34-39
WEIGHT (kg)	(Grille)	15.5(3)	15.5(3)	17(3)	17(3)
DIMENSIONS (mm)	Width (Grille)	570(650)	570(650)	570(650)	570(650)
	Depth (Grille)	570(650)	570(650)	570(650)	570(650)
	Height (Grille)	208(20)	208(20)	208(20)	208(20)
ELECTRICAL SUPPLY		220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz
PHASE		Single	Single	Single	Single
RUNNING CURRENT (A)	Heating	0.23	0.23	0.28	0.28
	Cooling	0.23	0.23	0.28	0.28
FUSE RATING (BS88) - HRC (A)		6	6	6	6
MAINS CABLE No. Cores		3	3	3	3
GRILLE MODEL REFERENCE		SLP-2AA	SLP-2AA	SLP-2AA	SLP-2AA

PLFY-P20, 25, 32, 40VCM-E

Lower View >



Side View >



PLFY-P-VLMD-E

2-Way Blow Ceiling Cassette Indoor Unit

The PLFY-P-VLMD-E cassette unit fits into the space in a suspended ceiling to provide heating or cooling. This new unit has been redesigned with lower unit height and lower noise levels.

- Light unit for ease of installation
- Terminal block on outside of unit for easy wiring
- Drain lift-pump mechanism as standard
- Newly designed decoration panel with air flow switching and swing functions as standard



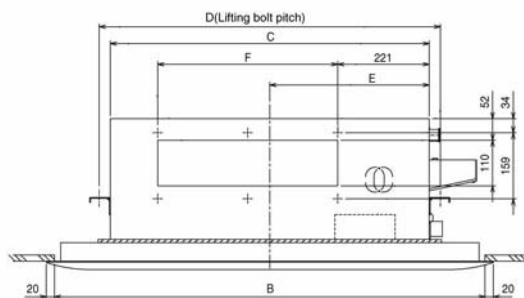
Technical Information

PLFY-P-VLMD-E - INDOOR UNIT

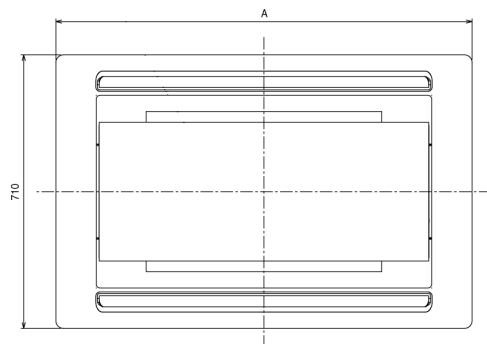
MODEL REFERENCE		PLFY-P20VLMD-E	PLFY-P25VLMD-E	PLFY-P32VLMD-E	PLFY-P40VLMD-E	PLFY-P50VLMD-E	PLFY-P63VLMD-E	PLFY-P80VLMD-E	PLFY-P100VLMD-E	PLFY-P125VLMD-E
CAPACITY (kW)	Heating (nominal)	2.5	3.2	4.0	5.0	6.3	8.0	10.0	12.5	16.0
	Cooling (nominal)	2.2	2.8	3.6	4.5	5.6	7.1	9.0	11.2	14.0
	Heating (UK)	2.3	3.0	3.7	4.6	5.8	7.4	9.2	11.6	14.8
	Cooling (UK)	2.1	2.6	3.4	4.3	5.3	6.7	8.5	10.6	13.2
	High Sensible Cooling (UK)	1.6	2.0	2.6	3.3	4.1	5.2	6.5	8.1	10.2
SHF	(UK)	0.81	0.77	0.74	0.67	0.70	0.72	0.71	0.73	0.73
High Sensible	(UK)	0.94	0.85	0.81	0.73	0.73	0.77	0.77	0.79	0.80
POWER INPUT (kW)	Heating (nominal)	0.065	0.065	0.065	0.074	0.075	0.094	0.140	0.150	0.27
	Cooling (nominal)	0.072	0.072	0.072	0.081	0.082	0.101	0.147	0.157	0.28
AIRFLOW (m3/min)	Lo-Mi1-Mi2-Hi	6.5-8.0-9.5	6.5-8.0-9.5	6.5-8.0-9.5	7.0-8.5-10.5	9.0-11.0-12.5	10.0-13.0-15.5	15.5-18.5-22.0	17.5-21.0-25.0	24-27-30-33
NOISE (dBA)	Lo-Mi1-Mi2-Hi	27-30-33	27-30-33	27-30-33	29-33-36	31-34-37	32-37-39	33-36-39	36-39-42	40-42-44-46
WEIGHT (kg)	(Grille)	23(6.5)	23(6.5)	24(6.5)	24(6.5)	27(7.5)	28(7.5)	44(12.5)	47(12.5)	56(13)
DIMENSIONS (mm)	Width (Grille)	776(1080)	776(1080)	776(1080)	776(1080)	946(1250)	946(1250)	1446(1750)	1446(1750)	1708(2010)
	Depth (Grille)	634(710)	634(710)	634(710)	634(710)	634(710)	634(710)	634(710)	634(710)	606(710)
	Height (Grille)	290(20)	290(20)	290(20)	290(20)	290(20)	290(20)	290(20)	290(20)	290(20)
ELECTRICAL SUPPLY		220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz
PHASE		Single	Single	Single	Single	Single	Single	Single	Single	Single
RUNNING CURRENT (A)	Heating	0.30	0.30	0.30	0.34	0.35	0.43	0.66	0.69	1.33
	Cooling	0.36	0.36	0.36	0.40	0.41	0.49	0.72	0.75	1.35
FUSE RATING (BS88) - HRC (A)		6	6	6	6	6	6	6	6	6
MAINS CABLE No. Cores		3	3	3	3	3	3	3	3	3
GRILLE MODEL REFERENCE		CMP-40VLW-B	CMP-40VLW-B	CMP-40VLW-B	CMP-40VLW-B	CMP-63VLW-B	CMP-63VLW-B	CMP-100VLW-B	CMP-100VLW-B	CMP-125VLW-B

PLFY-P20, 25, 32, 40, 50, 63, 80, 100VLMD-E

Front View >



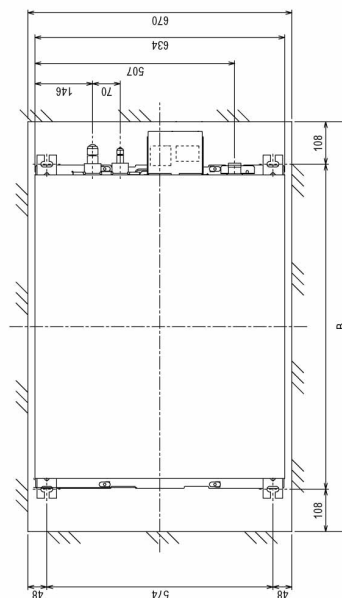
Lower View >



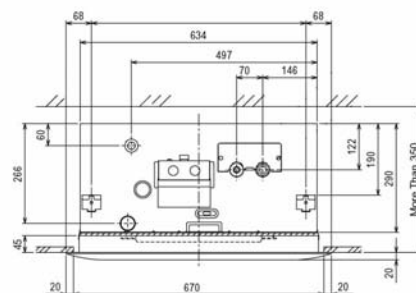
Model	A	B	C	D	E	F
PLFY-P20VLMD-E						
PLFY-P25VLMD-E						
PLFY-P32VLMD-E						
PLFY-P40VLMD-E						
PLFY-P50VLMD-E						
PLFY-P63VLMD-E						
PLFY-P80VLMD-E						
PLFY-P100VLMD-E						

Model	A	B	C	D	E	F
CMP-40VLW-B	1080	1040	776	824	388	217.5x2 =435
CMP-63VLW-B	1250	1210	946	994	473	
CMP-100VLW-B	1750	1710	1446	1494	723	188.5x4 =754

Upper View >

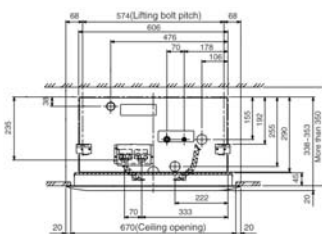


Side View >

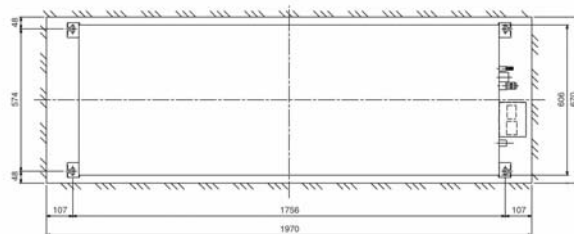


PLFY-PI25VLMD-E

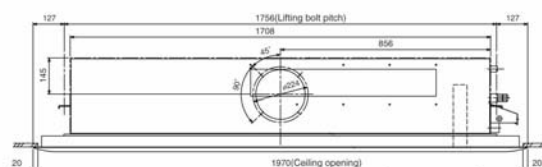
Side View >



Upper View >



Rear View >



Lower View >

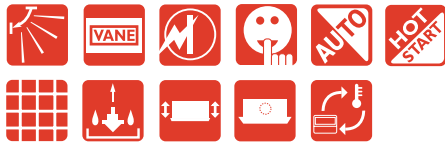


PMFY-P-VBM-E

I-Way Blow Ceiling Cassette Indoor Unit

Utilising a compact and lightweight body, the unit is perfect for applications where ceiling space is limited. A total body weight of 14kg makes it one of the lightest available, latest fan technology also makes it one of the quietest.

- Compact size for handy installation and easy maintenance
- Newly developed airflow control technology reduces noise levels to only 27dBA
- Drain lift pump mechanism allows the drain to be positioned anywhere up to 600mm from the ceiling's surface
- Only 230mm high
- Fresh air duct facility



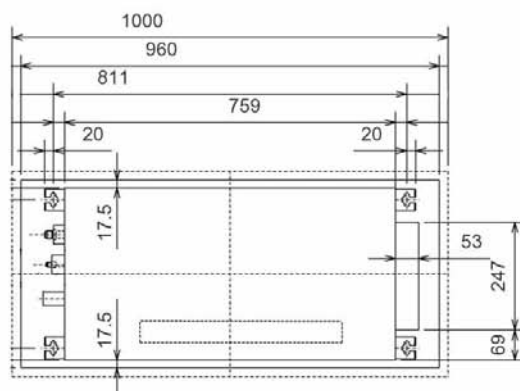
Technical Information

PMFY-P-VBM-E - INDOOR UNIT

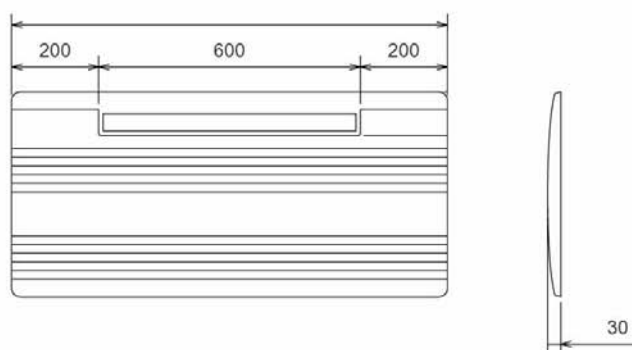
MODEL REFERENCE		PMFY-P20VBM-E	PMFY-P25VBM-E	PMFY-P32VBM-E	PMFY-P40VBM-E
CAPACITY (kW)	Heating (nominal)	2.5	3.2	4.0	5.0
	Cooling (nominal)	2.2	2.8	3.6	4.5
	Heating (UK)	2.3	3.0	3.7	4.6
	Cooling (UK)	2.1	2.6	3.4	4.3
	High Sensible	1.6	2.0	2.6	3.3
SHF	(UK)	0.81	0.77	0.71	0.70
High Sensible	(UK)	0.94	0.90	0.77	0.76
POWER INPUT (kW)	Heating (nominal)	0.042	0.044	0.044	0.054
	Cooling (nominal)	0.042	0.044	0.044	0.054
AIRFLOW (m3/min)	Lo-Mi-Mi2-Hi	6.5-7.2-8.0-8.7	7.3-8.0-8.6-9.3	7.3-8.0-8.6-9.3	7.7-8.7-9.7-10.7
NOISE (dBA)	Lo-Mi-Mi2-Hi	27-30-33-35	32-34-36-37	32-34-36-37	33-35-37-39
WEIGHT (kg)	(Grille)	14(3)	14(3)	14(3)	14(3)
DIMENSIONS (mm)	Width (Grille)	812(1000)	812(1000)	812(1000)	812(1000)
	Depth (Grille)	395(470)	395(470)	395(470)	395(470)
	Height (Grille)	230(30)	230(30)	230(30)	230(30)
ELECTRICAL SUPPLY		220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz
PHASE		Single	Single	Single	Single
RUNNING CURRENT (A)	Heating	0.20	0.21	0.21	0.26
	Cooling	0.20	0.21	0.21	0.26
FUSE RATING (BS88) - HRC (A)		6	6	6	6
MAINS CABLE No. Cores		3	3	3	3
GRILLE MODEL REFERENCE		PMP-40BM	PMP-40BM	PMP-40BM	PMP-40BM

PMFY-P20, 25, 32, 40VBM-E

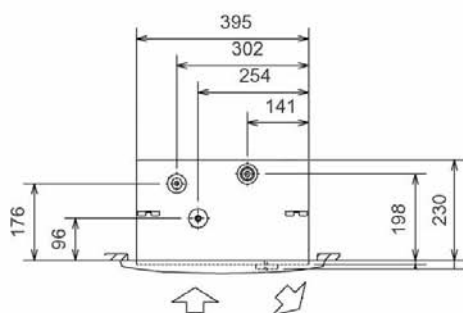
Upper View >



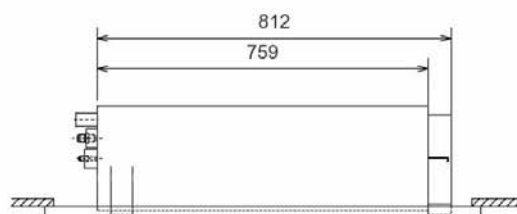
Lower View >



Side View >



Front View >



PEFY-P-VMS1-E

Ultra Thin Ceiling Concealed Ducted Indoor Unit

The ultra thin ceiling concealed ducted indoor unit offers increased flexibility and is particularly suitable for places where low noise operation is desired from a slimline body.

- Ultra thin body - height of only 200mm & width of only 790mm (P15-32)
- Extremely quiet operation - as low as 22dBA
- Cooling operation set temperature can be set down to 14°C db
- Static pressure of 5-50Pa
- Now available in a size 15, ideal for hotel rooms



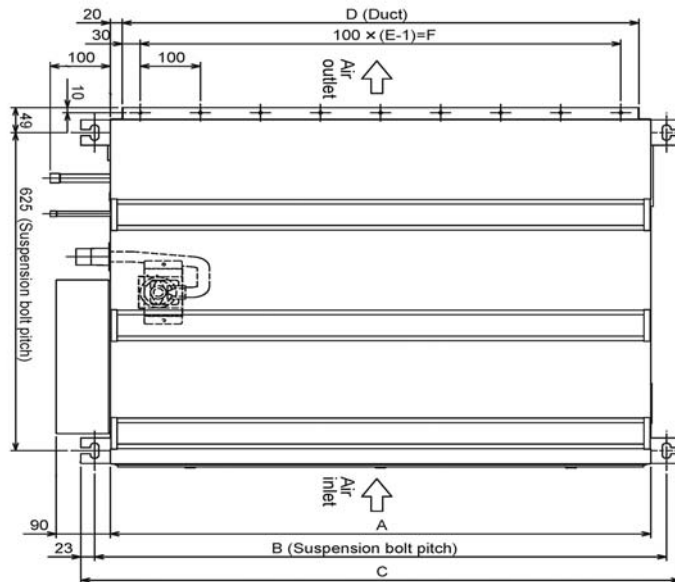
Technical Information

PEFY-P-VMS1-E - INDOOR UNIT

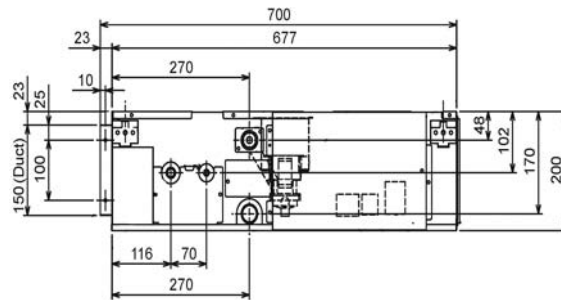
MODEL REFERENCE		PEFY-P15VMS1-E	PEFY-P20VMS1-E	PEFY-P25VMS1-E	PEFY-P32VMS1-E	PEFY-P40VMS1-E	PEFY-P50VMS1-E	PEFY-P63VMS1-E
CAPACITY (kW)	Heating (nominal)	1.9	2.5	3.2	4.0	5.0	6.3	8.0
	Cooling (nominal)	1.7	2.2	2.8	3.6	4.5	5.6	7.1
	Heating (UK)	1.8	2.3	3.0	3.7	4.6	5.8	7.4
	Cooling (UK)	1.5	2.0	2.5	3.2	4.0	5.0	6.3
	High Sensible Cooling (UK)	1.2	1.6	2.0	2.6	3.3	4.1	5.2
SHF	(UK)	0.93	0.85	0.84	0.78	0.75	0.74	0.75
High Sensible	(UK)	1.00	1.00	0.90	0.85	0.82	0.78	0.79
POWER INPUT (kW)	Heating (nominal)	0.03	0.03	0.04	0.05	0.05	0.07	0.07
	Cooling (nominal)	0.05	0.05	0.06	0.07	0.07	0.09	0.09
AIRFLOW (m3/min)	Lo-Mi-Hi	5.0-6.0-7.0	5.5-6.5-8.0	5.5-7.0-9.0	6.0-8.0-10.0	8.0-9.5-11.0	9.5-11.0-13.0	12.0-14.0-16.5
EXTERNAL STATIC PRESSURE (Pa)	Lo-Mi1-Mi2-Hi	5-15-35-50	5-15-35-50	5-15-35-50	5-15-35-50	5-15-35-50	5-15-35-50	5-15-35-50
NOISE (dBA) (5Pa)	Lo-Mi-Hi	22-24-28	23-25-29	24-26-30	24-27-32	28-30-33	30-32-35	30-33-36
WEIGHT (kg)		19	19	19	20	24	24	28
DIMENSIONS (mm)	Width	790	790	790	790	990	990	1190
	Depth	700	700	700	700	700	700	700
	Height	200	200	200	200	200	200	200
ELECTRICAL SUPPLY		220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz
PHASE		Single	Single	Single	Single	Single	Single	Single
RUNNING CURRENT (A)	Heating	0.31	0.36	0.39	0.39	0.45	0.56	0.61
	Cooling	0.42	0.47	0.50	0.50	0.56	0.67	0.72
FUSE RATING (BS88) - HRC (A)		6	6	6	6	6	6	6
MAINS CABLE No. Cores		3	3	3	3	3	3	3

PEFY-P15, 20, 25, 32, 40, 50, 63 VMS1-E

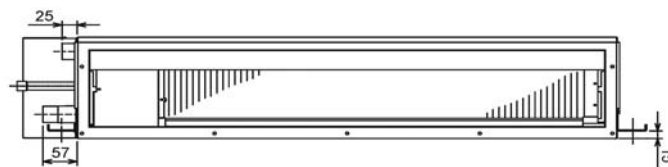
Upper View >



Side View >



Front View >



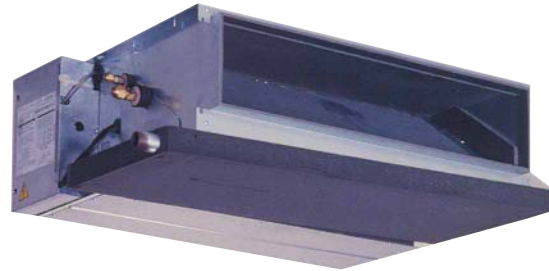
Model	A	B	C	D	E	F
PEFY-P15-32VMS1-E	700	752	798	660	7	600
PEFY-P40-50VMS1-E	900	952	998	860	9	800
PEFY-P63VMS1-E	1100	1152	1198	1060	11	1000

PEFY-P-VMM-E

Ceiling Concealed Ducted Indoor Unit

The PEFY-P-VMM-E ducted indoor unit is concealed within the ceiling space to allow unobtrusive air conditioning. Flexibility of duct layout allows air flow patterns to be arranged to suit any application.

- Reduced noise levels thanks to the use of a newly designed centrifugal fan - as low as 27dBA
- Drain lift-pump (option), 550mm of lift
- Complete flexibility in air conditioning design
- Cooling operation set temperature can be set down to 14°C db



Technical Information

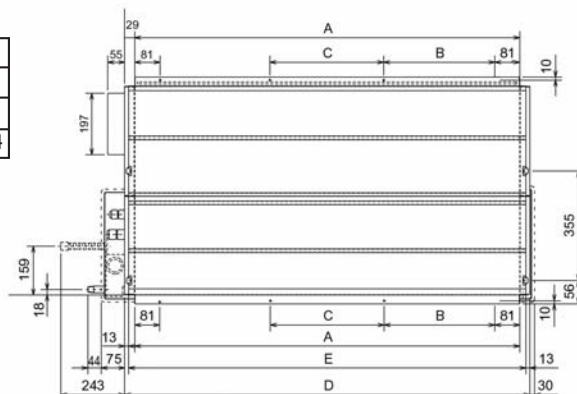
PEFY-P-VMM-E - INDOOR UNIT

MODEL REFERENCE		PEFY-P20VMM-E	PEFY-P25VMM-E	PEFY-P32VMM-E	PEFY-P40VMM-E	PEFY-P50VMM-E	PEFY-P63VMM-E	PEFY-P80VMM-E	PEFY-P100VMM-E	PEFY-P125VMM-E
CAPACITY (kW)	Heating (nominal)	2.5	3.2	4.0	5.0	6.3	8.0	10.0	12.5	16.0
	Cooling (nominal)	2.2	2.8	3.6	4.5	5.6	7.1	9.0	11.2	14.0
	Heating (UK)	2.3	3.0	3.7	4.6	5.8	7.4	9.2	11.6	14.8
	Cooling (UK)	2.1	2.6	3.4	4.3	5.3	6.7	8.5	10.6	13.2
	High Sensible Cooling (UK)	1.6	2.0	2.6	3.3	4.1	5.2	6.5	8.1	10.2
SHF	(UK)	0.86	0.77	0.76	0.77	0.75	0.75	0.72	0.78	0.77
High Sensible	(UK)	0.94	0.85	0.85	0.85	0.83	0.81	0.78	0.88	0.85
POWER INPUT (kW)	Heating (nominal)	0.15	0.15	0.17	0.19	0.20	0.22	0.25	0.29	0.40
	Cooling (nominal)	0.15	0.15	0.17	0.19	0.20	0.22	0.25	0.29	0.40
AIRFLOW (m3/min)	Lo-Mi-Hi	6.0-7.2-8.5	6.0-7.2-8.5	7.5-9.0-10.5	10-12-14	12.0-14.5-17.0	13.5-16.2-19.0	14.5-18.0-21.0	23-33	28-40
EXTERNAL STATIC PRESSURE (Pa) - Lo-Mi-Hi		30-50-100	30-50-100	30-50-100	30-50-100	30-50-100	30-50-100	30-50-100	50-130	50-130
NOISE (dBA)	Lo-Mi-Hi	27-30-32	27-30-32	28-32-35	31-34-37	31-35-38	31-35-38	32-36-39	40-44	42-45
WEIGHT (kg)		27	27	27	33	33	42	42	62	65
DIMENSIONS (mm)	Width	815	815	815	935	935	1175	1175	1415	1415
	Depth	700	700	700	700	700	700	700	740	740
	Height	295	295	295	295	295	295	295	325	325
ELECTRICAL SUPPLY		220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz
PHASE		Single	Single	Single	Single	Single	Single	Single	Single	Single
RUNNING CURRENT (A)	Heating	0.73	0.73	0.81	0.92	0.98	1.07	1.15	1.34	1.90
	Cooling	0.73	0.73	0.81	0.92	0.98	1.07	1.15	1.34	1.90
FUSE RATING (BS88) - HRC (A)		6	6	6	6	6	6	6	6	6
MAINS CABLE No. Cores		3	3	3	3	3	3	3	3	3

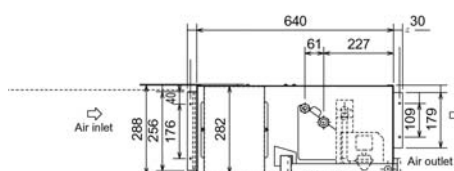
PEFY-P20, 25, 32, 40, 50, 63, 80VMM-E

Model	A	B	C	D	E
PEFY-P20-32VMM-E	652	245	-	710	684
PEFY-P40-50VMM-E	772	305	-	830	804
PEFY-P63-80VMM-E	1012	280	290	1070	1044

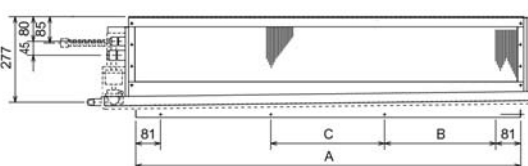
Upper View >



Side View >

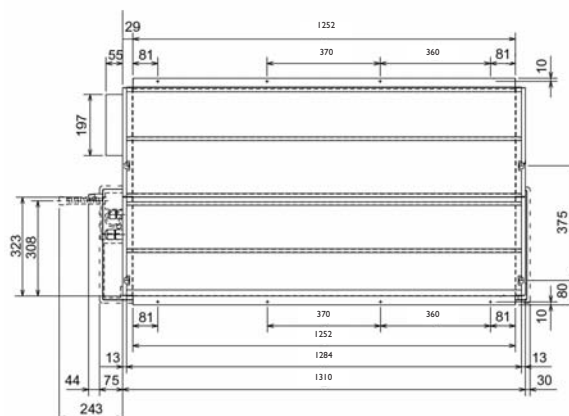


Front View >

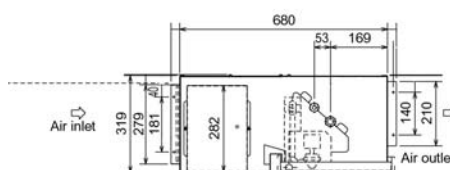


PEFY-P100, 125VMM-E

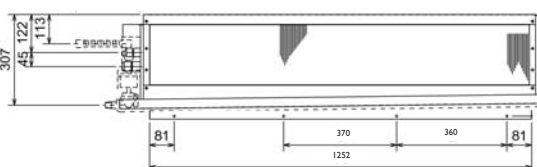
Upper View >



Side View >



Front View >

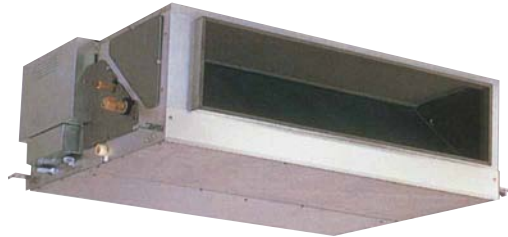


PEFY-P-VMH-E

High Static Pressure Ceiling Concealed Ducted Indoor Unit

With improved design flexibility as a result of increased external static pressure, the PEFY-P-VMH-E allows authentic duct air conditioning within the strictest aesthetic confines.

- External static pressure of 200Pa
- Greater flexibility for duct extension, branching air outlet configuration
- Reduced noise levels thanks to the use of newly designed centrifugal fan
- Duct can be connected to intake side
- Drain lift-pump (option) 550mm of lift
- Cooling operation set temperature can be set down to 14°C db

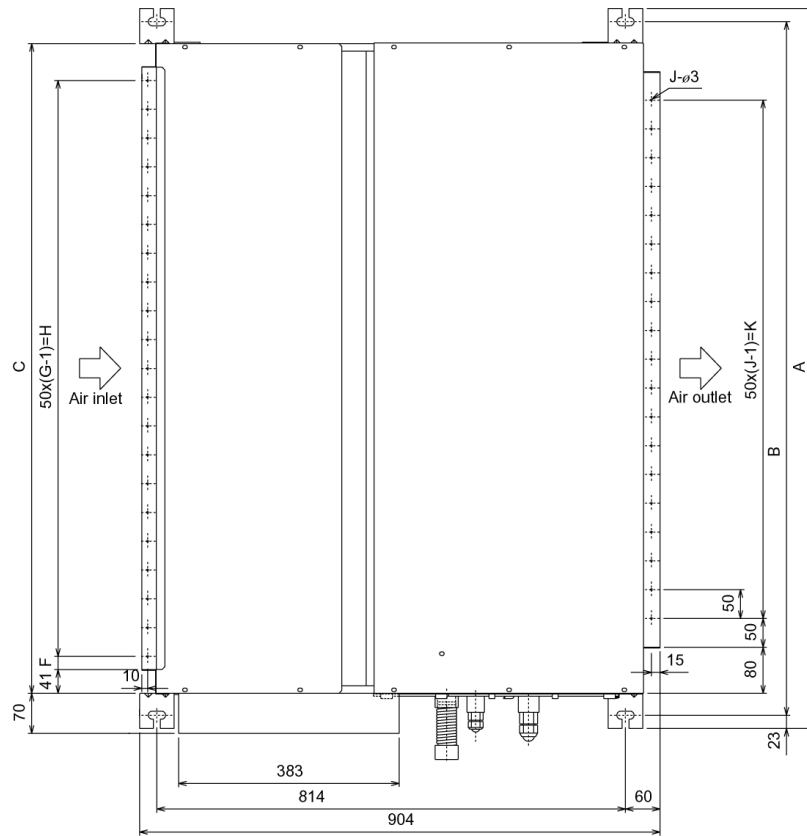


Technical Information

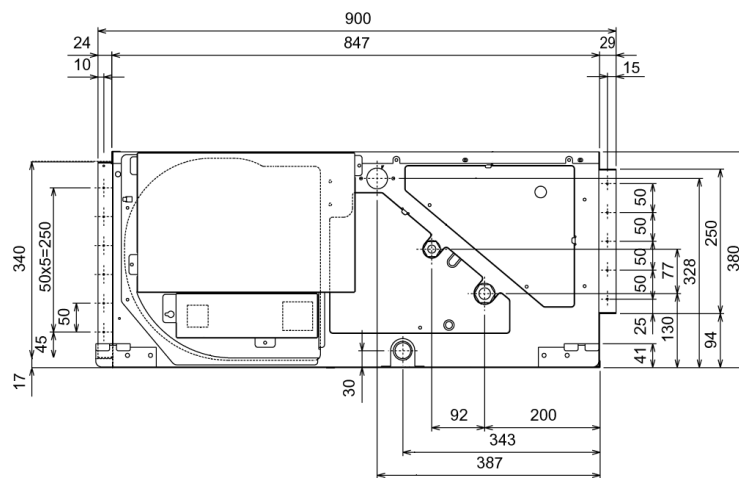
PEFY-P-VMH-E - INDOOR UNIT		PEFY-P80VMH-E	PEFY-P100VMH-E	PEFY-P125VMH-E	PEFY-P140VMH-E
CAPACITY (kW)	Heating (nominal)	10.0	12.5	16.0	18.0
	Cooling (nominal)	9.0	11.2	14.0	16.0
	Heating (UK)	9.2	11.6	14.8	16.6
	Cooling (UK)	8.5	10.6	13.2	15.1
	High Sensible Cooling (UK)	6.5	8.1	10.2	11.6
SHF	(UK)	0.74	0.80	0.74	0.74
High Sensible	(UK)	0.83	0.91	0.81	0.82
POWER INPUT (kW)	Heating (nominal)	0.32	0.48	0.48	0.48
	Cooling (nominal)	0.32	0.48	0.48	0.48
AIRFLOW (m3/min)	Lo-Hi	18-25	26.5-38.0	26.5-38.0	28-40
EXTERNAL STATIC PRESSURE (Pa) - Lo-Mi-Hi		100-150-200	100-150-200	100-150-200	100-150-200
NOISE (dBA)	Lo-Hi	38-43	38-44	38-44	38-44
WEIGHT (kg)		50	70	70	70
DIMENSIONS (mm)	Width	1000	1200	1200	1200
	Depth	900	900	900	900
	Height	380	380	380	380
ELECTRICAL SUPPLY		220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz
PHASE		Single	Single	Single	Single
RUNNING CURRENT (A)	Heating	1.47	2.34	2.34	2.35
	Cooling	1.47	2.34	2.34	2.35
FUSE RATING (BS88) - HRC (A)		6	6	6	6
MAINS CABLE No. Cores		3	3	3	3

PEFY-P80, 100, 125, 140VMH-E

Upper View >



Side View >



Model	A	B	C	F	G	H	J	K
PEFY-P80VMH-E	1050	1004	930	25	17	800	15	700
PEFY-P100-125-140VMH-E	1250	1204	1130	25	21	1000	19	900

PCFY-P-VGM-E

Ceiling Suspended Indoor Unit

Designed for ultra-quiet operation and easy maintenance, the unit provides comfortable air conditioning for a wide range of applications where floor or wall space cannot be used practically.

- Indoor unit designed for direct ceiling suspension
- Flush to wall installation for concealment of service connections
- Drain piping can be connected from left or right

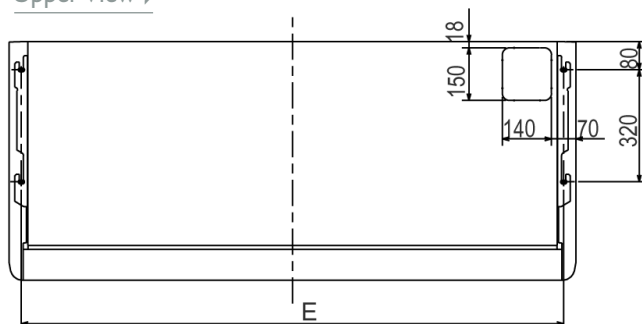


Technical Information

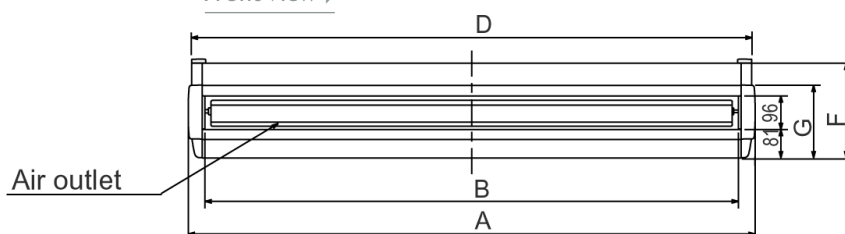
PCFY-P-VGM-E - INDOOR UNIT					
MODEL REFERENCE		PCFY-P40VGM-E	PCFY-P63VGM-E	PCFY-P100VGM-E	PCFY-P125VGM-E
CAPACITY (kW)	Heating (nominal)	5.0	8.0	12.5	16.0
	Cooling (nominal)	4.5	7.1	11.2	14.0
	Heating (UK)	4.6	7.4	11.6	14.8
	Cooling (UK)	4.3	6.7	10.6	13.2
High Sensible	Cooling (UK)	3.3	5.2	8.1	10.2
SHF	(UK)	0.72	0.72	0.71	0.70
High Sensible	(UK)	0.79	0.79	0.77	0.76
POWER INPUT (kW)	Heating (nominal)	0.10	0.13	0.16	0.24
	Cooling (nominal)	0.10	0.13	0.16	0.24
AIRFLOW (m3/min)	Lo-Mi1-Mi2-Hi	8-10-11-12	12-14-16-18	18-20-23-25	26-28-32-35
NOISE (dBA)	Lo-Mi1-Mi2-Hi	29-33-36-38	32-34-37-39	36-38-41-43	37-39-42-44
WEIGHT (kg)		27	34	37	43
DIMENSIONS (mm)	Width	1000	1310	1310	1620
	Depth	680	680	680	680
	Height	210	210	270	270
ELECTRICAL SUPPLY		220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz
PHASE		Single	Single	Single	Single
RUNNING CURRENT (A)	Heating	0.46	0.60	0.73	1.10
	Cooling	0.46	0.60	0.73	1.10
FUSE RATING (BS88) - HRC (A)		6	6	6	6
MAINS CABLE No. Cores		3	3	3	3

PCFY-P40, 63, 100, 125VGM-E

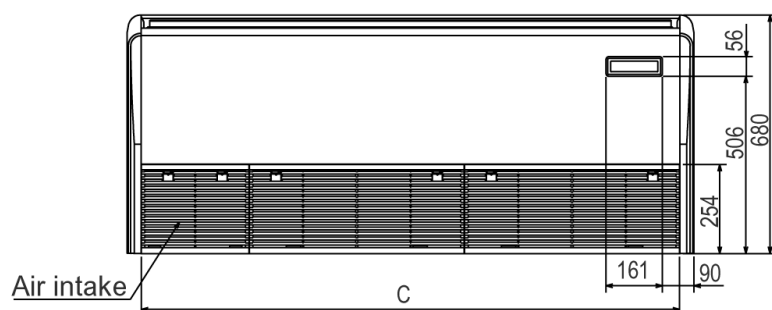
Upper View >



Front View >



Lower View >



Model	A	B	C	D	E	F	G
PCFY -P40VGM-E	1,000	904	918	983	933	210	180
PCFY -P63VGM-E	1,310	1,214	1,228	1,290	1,240	210	180
PCFY -P100VGM-E	1,310	1,214	1,228	1,290	1,240	270	207
PCFY -P125VGM-E	1,620	1,524	1,535	1,600	1,547	270	207

PKFY-P-VBM-E/VGM-E/VFM-E

Wall Mounted Indoor Units

An elegant design combined with compact dimensions and quiet operation make the PKFY-P an ideal unit choice. Noise levels are significantly reduced thanks to a unique airflow passage design that not only makes the unit one of the quietest in the industry, but also suppresses condensation and prevents mixing with secondary air.

- Compact design - only 815mm wide (VBM-E)
- Front grille opening for easy cleaning
- Front power supply for easy wiring after installation
- 5-way piping provides more flexibility in selection of installation sites



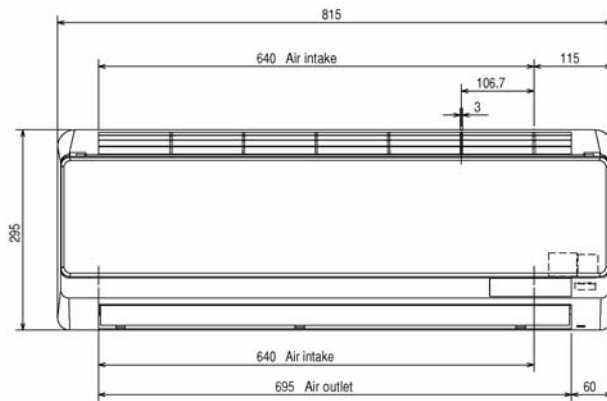
Technical Information

PKFY-P-VBM-E /VGM-E /VFM-E - INDOOR UNIT

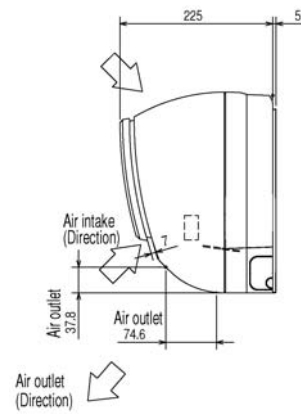
MODEL REFERENCE		PKFY-P20VBM-E	PKFY-P25VBM-E	PKFY-P32VGM-E	PKFY-P40VGM-E	PKFY-P50VGM-E	PKFY-P63VFM-E
CAPACITY (kW)	Heating (nominal)	2.5	3.2	4.0	5.0	6.3	8.0
	Cooling (nominal)	2.2	2.8	3.6	4.5	5.6	7.1
	Heating (UK)	2.3	3.0	3.7	4.6	5.8	7.4
	Cooling (UK)	2.1	2.6	3.4	4.3	5.3	6.7
High Sensible	Cooling (UK)	1.6	2.0	2.6	3.3	4.1	5.2
SHF	(UK)	0.71	0.73	0.79	0.74	0.72	0.78
High Sensible	(UK)	0.75	0.80	0.88	0.82	0.78	0.85
POWER INPUT (kW)	Heating (nominal)	0.04	0.04	0.07	0.07	0.07	0.12
	Cooling (nominal)	0.04	0.04	0.07	0.07	0.07	0.12
AIRFLOW (m3/min)	Lo-Mi1-Mi2-Hi	4.9-5.2-5.6-5.9	4.9-5.2-5.6-5.9	8.0-9.5-10.5-11.5	8.0-9.5-10.5-11.5	9-10-11-12	15-20
NOISE (dBA)	Lo-Mi1-Mi2-Hi	29-31-34-36	29-31-34-36	33-36-38-41	33-36-38-41	34-37-40-43	39-45
WEIGHT (kg)		10	10	16	16	16	24
DIMENSIONS (mm)	Width	815	815	990	990	990	1400
	Depth	225	225	235	235	235	235
	Height	295	295	340	340	340	340
ELECTRICAL SUPPLY		220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz
PHASE		Single	Single	Single	Single	Single	Single
RUNNING CURRENT (A)	Heating	0.20	0.20	0.32	0.32	0.32	0.55
	Cooling	0.20	0.20	0.32	0.32	0.32	0.55
FUSE RATING (BS88) - HRC (A)		6	6	6	6	6	6
MAINS CABLE No. Cores		3	3	3	3	3	3

PKFY-P20, 25VBM-E

Front View >

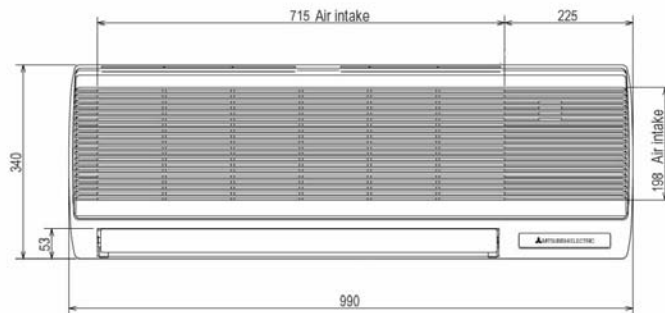


Right Side View >

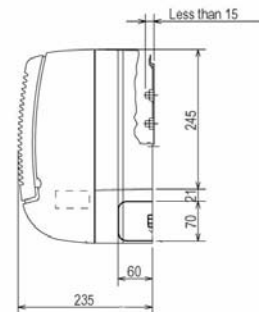


PKFY-P32, 40, 50VGM-E

Front View >

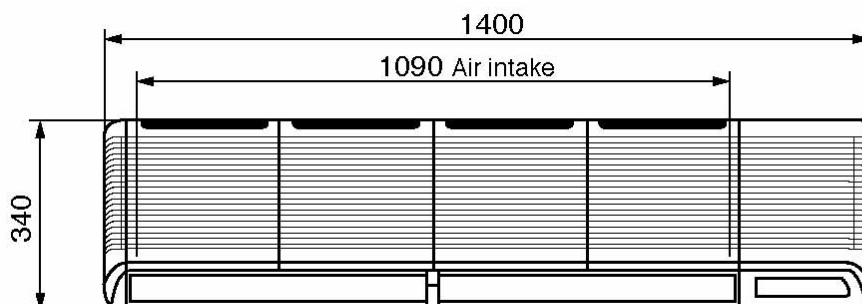


Right Side View >

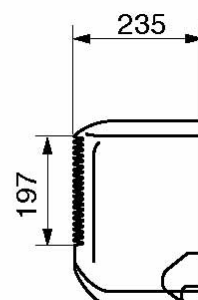


PKFY-P63VFM-E

Front View >



Right Side View >



PFFY-P-VLRM-E

Floor Standing Concealed Indoor Unit

A compact concealed unit providing simple, effective air conditioning in perimeter zones. The unit is easy to install and at only 220mm deep offers an unobtrusive method of delivering highly efficient air-conditioning performance.

- Concealed unit for hidden installation
- Ideal for perimeter refurbishments
- Cooling operation set temperature can be set down to 14°C db

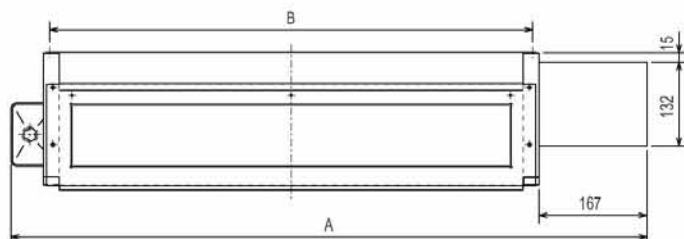


Technical Information

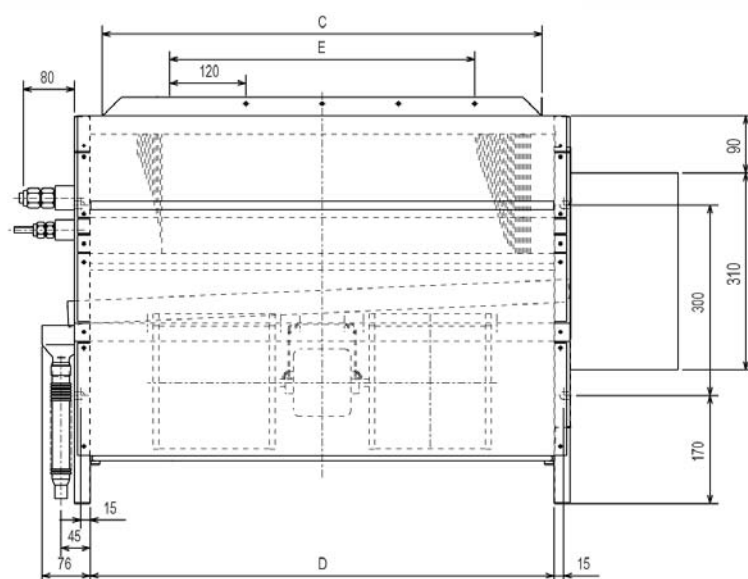
PFFY-P-VLRM-E - INDOOR UNIT		PFFY-P20VLRM-E	PFFY-P25VLRM-E	PFFY-P32VLRM-E	PFFY-P40VLRM-E	PFFY-P50VLRM-E	PFFY-P63VLRM-E
MODEL REFERENCE							
CAPACITY (kW)	Heating (nominal)	2.5	3.2	4.0	5.0	6.3	8.0
	Cooling (nominal)	2.2	2.8	3.6	4.5	5.6	7.1
	Heating (UK)	2.3	3.0	3.7	4.6	5.8	7.4
	Cooling (UK)	2.1	2.6	3.4	4.3	5.3	6.7
High Sensible	Cooling (UK)	1.7	2.0	2.6	3.3	4.1	5.2
SHF	(UK)	0.90	0.81	0.74	0.72	0.74	0.73
High Sensible	(UK)	1.00	0.95	0.81	0.79	0.80	0.79
POWER INPUT (kW)	Heating (nominal)	0.04	0.04	0.06	0.065	0.085	0.10
	Cooling (nominal)	0.04	0.04	0.06	0.065	0.085	0.10
AIRFLOW (m3/min)	Lo-Hi	5.5-6.5	5.5-6.5	7-9	9-11	12-14	12-15.5
NOISE (dBA)	Lo-Hi	34-40	34-40	35-40	38-43	38-43	40-46
WEIGHT (kg)		18.5	18.5	20	21	25	27
DIMENSIONS (mm)	Width	886	886	1006	1006	1246	1246
	Depth	220	220	220	220	220	220
	Height	639	639	639	639	639	639
ELECTRICAL SUPPLY		220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz
PHASE		Single	Single	Single	Single	Single	Single
RUNNING CURRENT (A)	Heating	0.19	0.19	0.29	0.32	0.40	0.46
	Cooling	0.19	0.19	0.29	0.32	0.40	0.46
FUSE RATING (BS88) - HRC (A)		6	6	6	6	6	6
MAINS CABLE No. Cores		3	3	3	3	3	3

PFFY-P20, 25, 32, 40, 50, 63VLRM-E

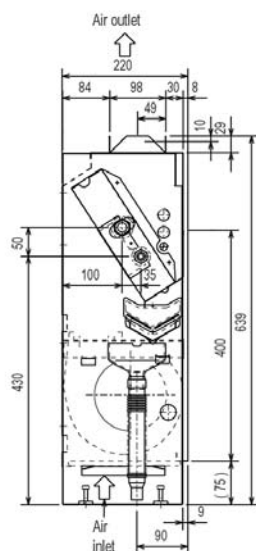
Upper View >



Front View >



Side View >



Dimensions

Model	A	B	C	D	E
PFFY-P20VLRM-E	886	640	572	610	360
PFFY-P25VLRM-E	886	640	572	610	360
PFFY-P32VLRM-E	1006	760	692	730	480
PFFY-P40VLRM-E	1006	760	692	730	480
PFFY-P50VLRM-E	1246	1000	932	970	720
PFFY-P63VLRM-E	1246	1000	932	970	720

PFFY-P-VLRMM-E

Floor Standing Concealed Indoor Unit

A compact concealed unit providing simple, effective air conditioning in perimeter zones. The unit is easy to install and at only 220mm deep offers an unobtrusive method of delivering highly efficient air-conditioning performance.

- Reduced noise levels compared to the PFFY-P-VLRM-E version
- Cooling operation set temperature can be set down to 14°C db
- Static pressure. The new unit has 3 static pressure settings - 20/40/60Pa ideal for ducting in the perimeter zone
- Concealed unit for hidden installation. The unit can be hidden behind a wardrobe in a hotel, then ducted above and below the wardrobe doors. This offers lower noise, less disruption and a low visual impact



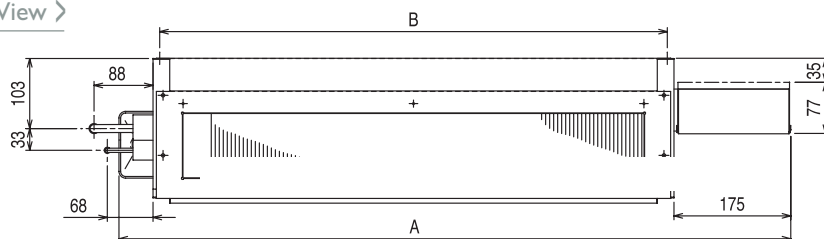
Technical Information

PFFY-P-VLRMM-E - INDOOR UNIT

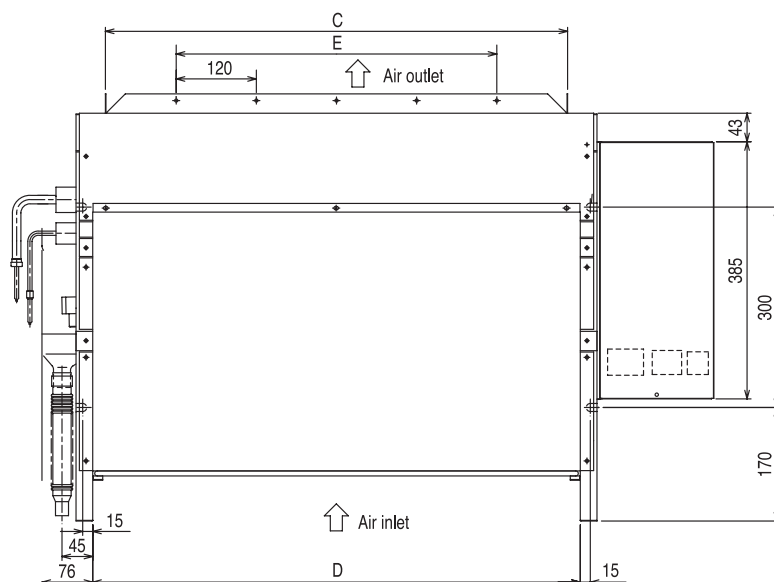
MODEL REFERENCE		PFFY-P20VLRMM-E	PFFY-P25VLRMM-E	PFFY-P32VLRMM-E	PFFY-P40VLRMM-E	PFFY-P50VLRMM-E	PFFY-P63VLRMM-E
CAPACITY (kW)	Heating (nominal)	2.5	3.2	4.0	5.0	6.3	8.0
	Cooling (nominal)	2.2	2.8	3.6	4.5	5.6	7.1
	Heating (UK)	2.3	3.0	3.7	4.6	5.8	7.4
	Cooling (UK)	2.0	2.5	3.2	4.0	5.0	6.3
	High Sensible Cooling (UK)	1.6	2.0	2.6	3.3	4.1	5.2
SHF	(UK)	0.80	0.76	0.75	0.75	0.76	0.73
High Sensible	(UK)	0.88	0.80	0.81	0.79	0.80	0.79
POWER INPUT (kW)	Heating (nominal)	0.04	0.04	0.04	0.05	0.05	0.07
	Cooling (nominal)	0.04	0.04	0.04	0.05	0.05	0.07
AIRFLOW (m3/min)	Lo-Mi-Hi	4.5-5.5-6.5	4.5-5.5-6.5	6.5-7.5-9	8-9.5-11	10-12-14	11-13-15.5
EXTERNAL STATIC PRESSURE (Pa) Lo-Mi-Hi		20-40-60	20-40-60	20-40-60	20-40-60	20-40-60	20-40-60
NOISE (dBA) (20Pa)	Lo-Mi-Hi	31-36-40	31-36-40	27-32-37	30-36-40	32-37-41	35-40-44
WEIGHT (kg)		18.5	18.5	20	21	25	27
DIMENSIONS (mm)	Width	886	886	1006	1006	1246	1246
	Depth	220	220	220	220	220	220
	Height	639	639	639	639	639	639
ELECTRICAL SUPPLY		220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz
PHASE		Single	Single	Single	Single	Single	Single
RUNNING CURRENT (A)	Heating	0.34	0.34	0.38	0.43	0.48	0.59
	Cooling	0.34	0.34	0.38	0.43	0.48	0.59
FUSE RATING (BS88) - HRC (A)		6	6	6	6	6	6
MAINS CABLE No. Cores		3	3	3	3	3	3

PFFY-P20, 25, 32, 40, 50, 63VLRMM-E

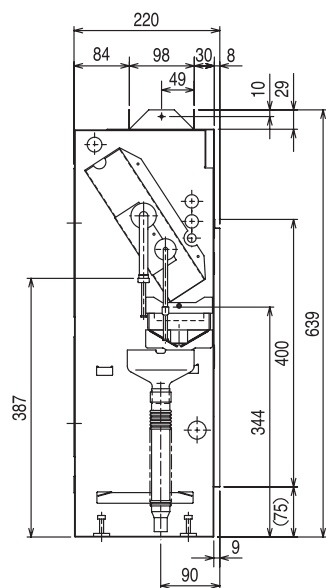
Upper View >



Front View >



Side View >



Model	A	B	C	D	E
PFFY-P20VLRMM-E	886	640	572	610	360
PFFY-P25VLRMM-E	1006	760	692	730	480
PFFY-P32VLRMM-E	1246	1000	932	970	720
PFFY-P40VLRMM-E					
PFFY-P50VLRMM-E					
PFFY-P63VLRMM-E					

PFFY-P-VLEM-E

Floor Standing Exposed Indoor Unit

A compact cased unit providing simple, effective air conditioning in perimeter zones. The unit is easy to install, and at only 220mm deep offers an unobtrusive method of delivering a highly efficient air-conditioning performance.

- Remote controller can be incorporated into the main unit
- Cooling operation set temperature can be set down to 14°C db

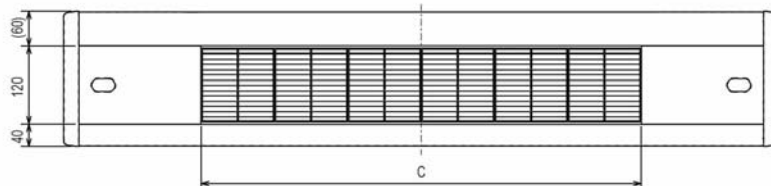


Technical Information

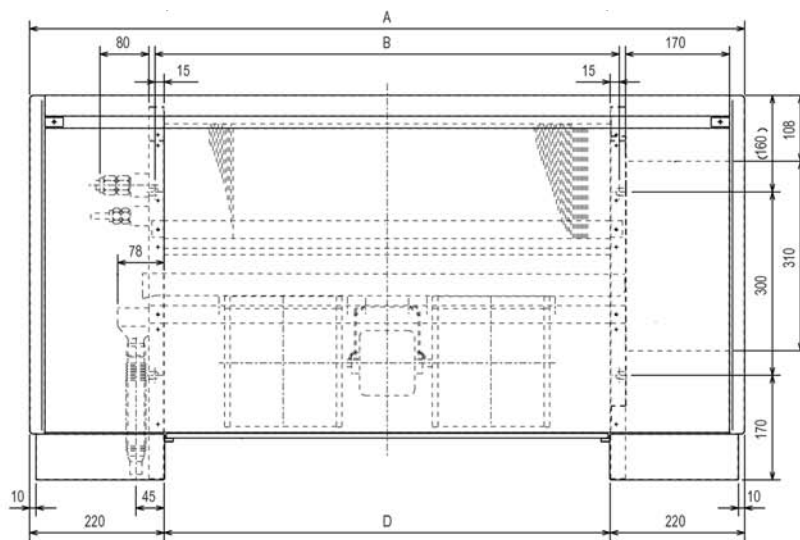
PFFY-P-VLEM-E - INDOOR UNIT		PFFY-P20VLEM-E	PFFY-P25VLEM-E	PFFY-P32VLEM-E	PFFY-P40VLEM-E	PFFY-P50VLEM-E	PFFY-P63VLEM-E
MODEL REFERENCE							
CAPACITY (kW)	Heating (nominal)	2.5	3.2	4.0	5.0	6.3	8.0
	Cooling (nominal)	2.2	2.8	3.6	4.5	5.6	7.1
	Heating (UK)	2.3	3.0	3.7	4.6	5.8	7.4
	Cooling (UK)	2.1	2.6	3.4	4.3	5.3	6.7
	High Sensible	1.7	2.0	2.6	3.3	4.1	5.2
SHF	(UK)	0.90	0.81	0.74	0.72	0.74	0.73
High Sensible	(UK)	1.00	0.95	0.81	0.79	0.80	0.79
POWER INPUT (kW)	Heating (nominal)	0.04	0.04	0.06	0.065	0.085	0.10
	Cooling (nominal)	0.04	0.04	0.06	0.065	0.085	0.10
AIRFLOW (m3/min)	Lo-Hi	5.5-6.5	5.5-6.5	7-9	9-11	12-14	12-15.5
NOISE (dBA)	Lo-Hi	34-40	34-40	35-40	38-43	38-43	40-46
WEIGHT (kg)		23	23	25	26	30	32
DIMENSIONS (mm)	Width	1050	1050	1170	1170	1410	1410
	Depth	220	220	220	220	220	220
	Height	630	630	630	630	630	630
ELECTRICAL SUPPLY		220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz
PHASE		Single	Single	Single	Single	Single	Single
RUNNING CURRENT (A)	Heating	0.19	0.19	0.29	0.32	0.40	0.46
	Cooling	0.19	0.19	0.29	0.32	0.40	0.46
FUSE RATING (BS88) - HRC (A)		6	6	6	6	6	6
MAINS CABLE No. Cores		3	3	3	3	3	3

PFFY-P20,25,32,40,50,63VLEM-E

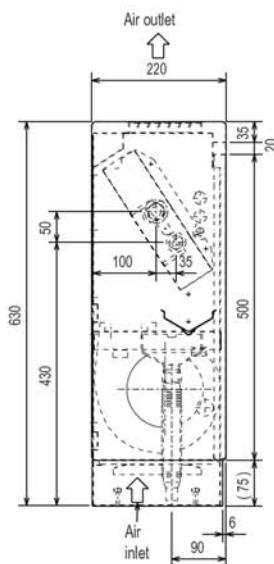
Upper View >



Front View >



Side View >



Dimensions

Model	A	B	C	D
PFFY -P20VLEM-E	1050	640	600	610
PFFY -P25VLEM-E	1050	640	600	610
PFFY -P32VLEM-E	1170	760	720	730
PFFY -P40VLEM-E	1170	760	720	730
PFFY -P50VLEM-E	1410	1000	960	970
PFFY -P63VLEM-E	1410	1000	960	970

PFFY-P-VKM-E

Floor Standing Exposed Indoor Unit

The PFFY-P-VKM-E series is extremely versatile and is designed for wall attached installation at floor level. The auto swing vane provides a more natural and comfortable airflow throughout the room and the lightweight, compact design makes installation easy.

- Pure white, slimline design
- Upper and lower vanes for optimum, powerful and efficient air distribution

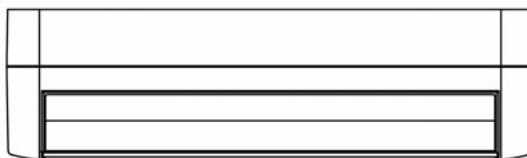


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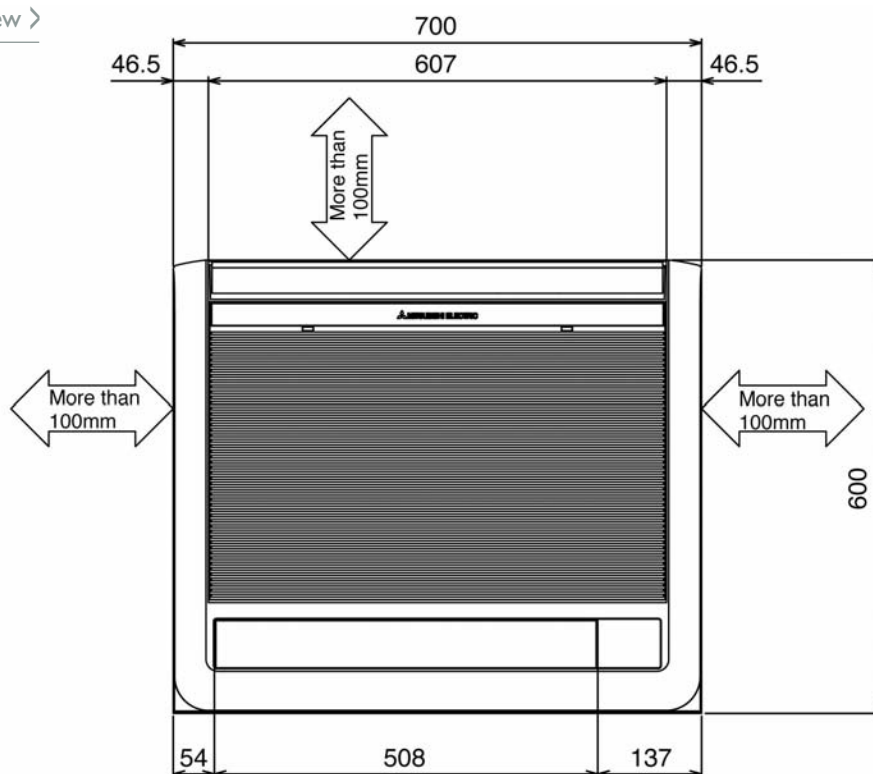
PFFY-P-VKM-E - INDOOR UNIT					
MODEL REFERENCE		PFFY-P20VKM-E	PFFY-P25VKM-E	PFFY-P32VKM-E	PFFY-P40VKM-E
CAPACITY (kW)	Heating (nominal)	2.5	3.2	4.0	5.0
	Cooling (nominal)	2.2	2.8	3.6	4.5
	Heating (UK)	2.3	3.0	3.7	4.6
	Cooling (UK)	2.1	2.6	3.4	4.3
	High Sensible	1.6	2.0	2.6	3.3
SHF	(UK)	0.81	0.77	0.71	0.70
High Sensible	(UK)	0.88	0.85	0.77	0.76
POWER INPUT (kW)	Heating (nominal)	0.025	0.025	0.025	0.028
	Cooling (nominal)	0.025	0.025	0.025	0.028
AIRFLOW (m3/min)	Lo-Mid-Mi2-Hi	5.9-6.8-7.6-8.7	6.1-7.0-8.0-9.1	6.1-7.0-8.0-9.1	8.0-9.0-9.5-10.7
NOISE (dBA)	Lo-Mid-Mi2-Hi	27-31-34-37	28-32-35-38	28-32-35-38	35-38-42-44
WEIGHT (kg)		15	15	15	15
DIMENSIONS (mm)	Width	700	700	700	700
	Depth	200	200	200	200
	Height	600	600	600	600
ELECTRICAL SUPPLY		220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz
PHASE		Single	Single	Single	Single
RUNNING CURRENT (A)	Heating	0.20	0.20	0.20	0.24
	Cooling	0.20	0.20	0.20	0.24
FUSE RATING (BS88) - HRC (A)		6	6	6	6
MAINS CABLE No. Cores		3	3	3	3

PFFY-P20,25,32,40VKM-E

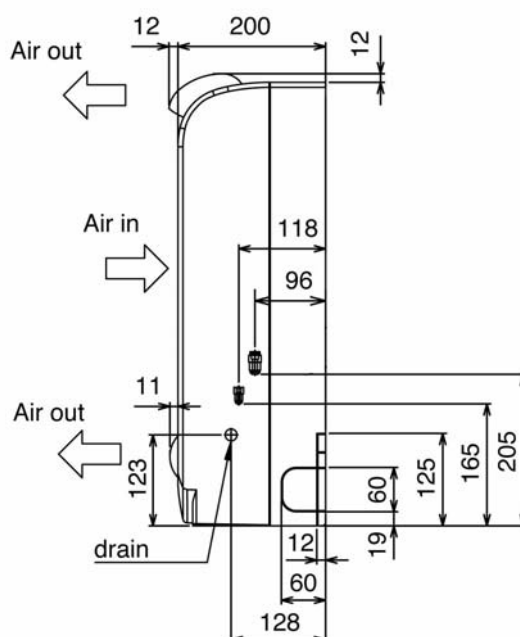
Upper View >



Front View >



Side View >

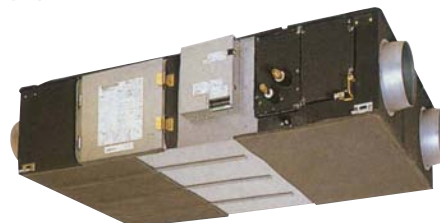


GUF-50RD3 & GUF100RD3

Lossnay Outdoor Air Processing Indoor Unit

The GUF-50RD3 and GUF-100RD3 outdoor air processing units can be used with any of the extensive range of City Multi indoor units to provide ventilation, dust removal, humidification and heat recovery.

- A combination of a Lossnay & City Multi indoor in a single unit
- Air temperature in any room can be adjusted to the desired temperature via this unit which is used as an indoor unit of the City Multi air conditioning system
- The ventilating and air conditioning functions are integrated in a single unit, saving space and installation costs
- Heat recovery helps to save energy - a benefit that's not only good for the environment, but also great for cutting energy costs
- Free cooling is also available should outdoor conditions be suitable



Technical Information

OUTDOOR AIR PROCESSING INDOOR UNIT

MODEL REFERENCE		GUF-50RD3	GUF-100RD3
CAPACITY (kW)	Heating (nominal)	6.42 (2.25)	13.00 (4.70)
	Cooling (nominal)	5.29 (1.66)	10.81 (3.49)
	Heating (UK)	5.93 (2.08)	12.01 (4.34)
	Cooling (UK)	5.03 (1.58)	10.27 (3.32)
POWER INPUT (kW)		0.265	0.505
AIRFLOW (m ³ /h)	Lo-Hi	400-500	800-1000
NOISE (dBA)	Lo-Hi	29.5-34.5	34-39
WEIGHT (kg)		54	92
DIMENSIONS (mm)	Width	1016	1231
	Depth	1288	1580
	Height	317	398
ELECTRICAL SUPPLY		220-240v, 50Hz	220-240v, 50Hz
PHASE		Single	Single
RUNNING CURRENT (A)	Lo-Hi	0.70-1.15	1.73-2.20
FUSE RATING (BS88) - HRC (A)		6	6
MAINS CABLE No. Cores		3	3

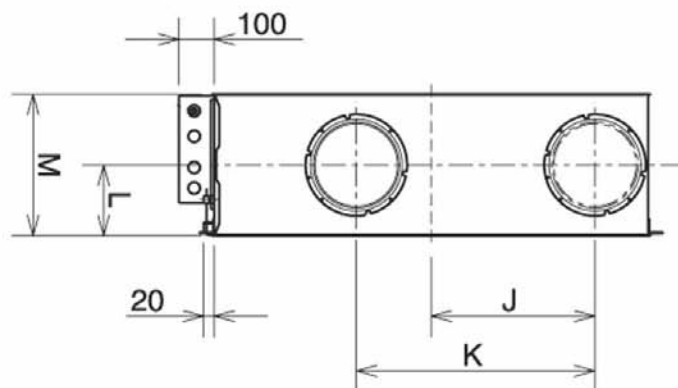
Attention

- Nominal Condition:**
Cooling/Heating capacity indicates the value of operation under the following air condition and above air volume.
Cooling: Indoor 27°C DB/19.5°C WB, Outdoor 35°C DB/24°C WB.
Heating: Indoor 21°C DB/14.6°C WB, Outdoor 7°C DB/6°C WB.
- UK Condition:**
Summer: Indoor 21°C, Outdoor 27°C
Winter: Indoor 21°C, Outdoor -1°CWB
- The figures in () indicates the heat recovery at Lossnay core.
- The current, input and efficiency are based on the above air volume.
- The air nozzle noise (45° angle 1.5m ahead) is about 6dB greater than the indicated value. (High notch).
- Specifications may be subject to change without notice.

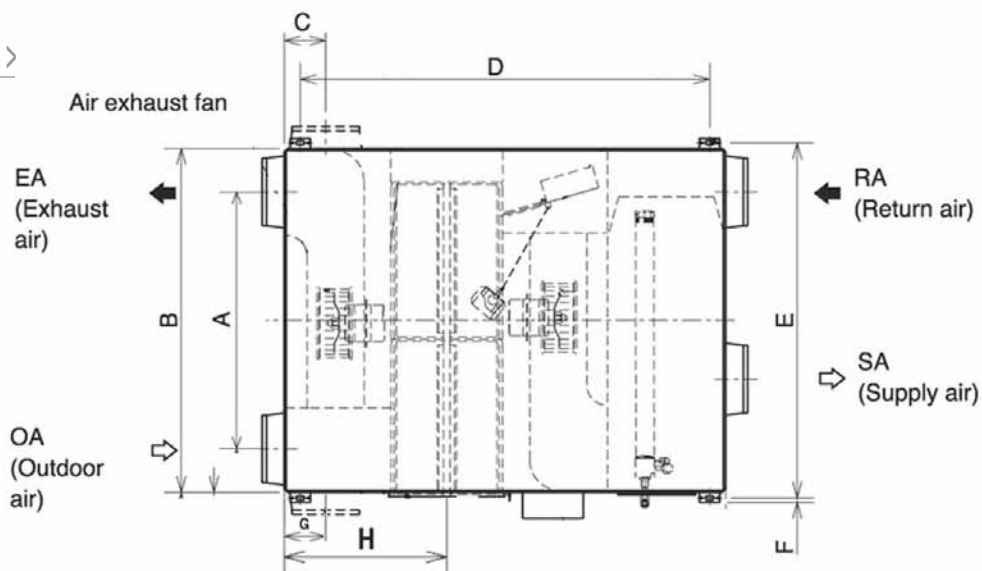


GUF-50/I00RD3

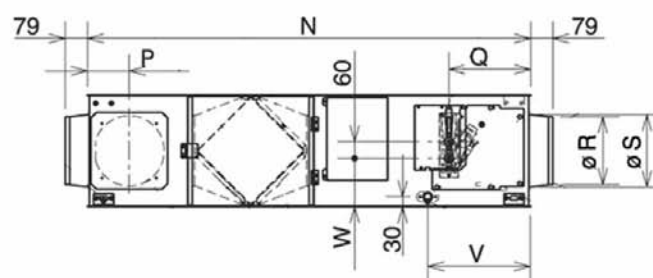
Side View >



Upper View >



Front View >



Model	A	B	C	D	E	F	G	H	J	K	L
GUF-50RD3	745	1,016	124	1,185	1,048	22	124	450	372.5	435	158.5
GUF-100RD3	920	1,231	149	1,465	1,271	16	149	600	460	670	199
Model	M	N	P	Q	R	S	V	W			
GUF-50RD3	317	1,288	124	266	192	208	347	135			
GUF-100RD3	398	1,580	149	280	242	258	361	169			

PQFY-P

VRF Heat Pump Boiler

It is well known in the air conditioning industry that heat pumps are proven to provide highly efficient cooling. However, in line with other forward-thinking countries, such as Sweden and Switzerland, Mitsubishi Electric have now designed a heat pump boiler to provide heating and hot water, suitable for underfloor heating or swimming pools. Heat pump technology is largely untapped and offers great potential with incredible design flexibility, excellent use of energy and greatly reduced CO₂ emissions.

An overview of the use of Heat Pump Boilers

The cooling operation of an air conditioning system that effectively extracts heat from a space, will normally be achieved at between 3.5 to 4.0 COP. This in itself is an efficient system. However, by recovering that heat and using it to heat up water the efficiency of the system increases dramatically to over 6.0 COP. Without the use of a Heat Pump Boiler, these levels of efficiency are rarely achieved in Spring and Autumn, when different rooms may need heating and cooling from the air conditioning at the same time.

By using the VRF Heat Pump Boiler in a permanent heat recovery application, these efficiencies are now possible all year round. This provides a reduction in running costs and CO₂ emissions, both of which play a crucial role when obtaining planning permission as covered by the new Part L2 Legislation.

There is a further reduction in capital costs as there is very little or no requirement for gas boilers and associated works. Particularly when the small amount of heating required in order to boost domestic hot water from the 45°C (produced by the heat pump), to the required 60°C supply temperature, can be provided by means of electric. Thus negating the need for the installation of a gas supply entirely.



Technical Information

PQFY-P			
MODEL REFERENCE		PQFY-P140	PQFY-P250
CAPACITY (kW)	Heating (nominal)	14.0	25.0
PIPE SIZE mm(in)	Gas Refrigerant	15.88 (5/8")	19.05 (3/4")
	Liquid Refrigerant	9.52 (3/8")	9.52 (3/8")
	Water	22	28
WEIGHT (kg)		32	50
DIMENSIONS (mm)	Width	500	610
	Depth	410	510
	Height	560	560
ELECTRICAL SUPPLY		220-240v, 50Hz	220-240v, 50Hz
PHASE		Single	Single
MAINS CABLE No. Cores		3	3

Unit Flow Rate & Pressure Drop

For calculating the Water Flow Rate please use the following calculation:

Capacity (kW) = Flow Rate of Water (l/s) × Specific Heat Capacity of Water × (Outlet Water Temp(°C) - Inlet Water Temp (°C))

Specific Heat Capacity of water is normally 4.2Kj/KgK

PQFY-P140								
Flow Rate	l/s	0.38	0.45	0.53	0.61	0.68	0.76	0.83
Pressure Drop	kPa	11.72	15.86	20.69	25.51	30.34	36.54	42.75

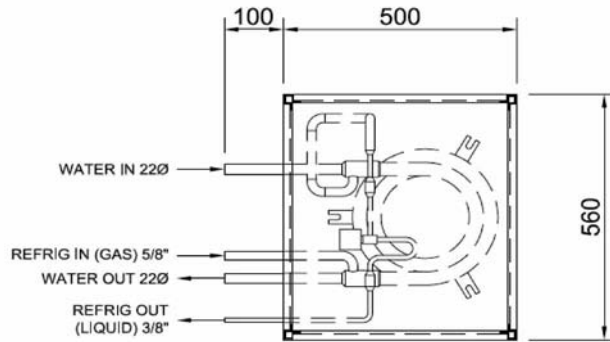
PQFY-P250								
Flow Rate	l/s	0.61	0.76	0.91	1.06	1.21	1.36	1.52
Pressure Drop	kPa	14.48	20.69	27.58	35.16	44.13	53.09	62.06

Note: The water flow rate can be above or below these values, but no pressure drop operating data can be provided.

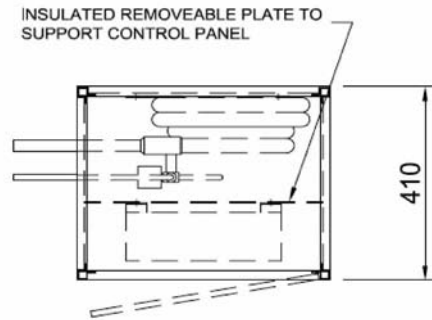
PQFY-PI 40

Front View >

Front control panel not shown



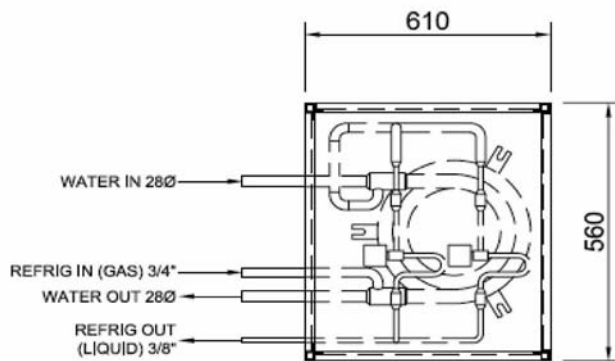
Upper View >



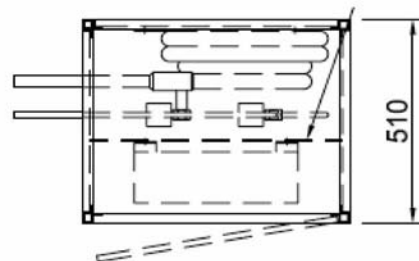
PQFY-P250

Front View >

Front control panel not shown



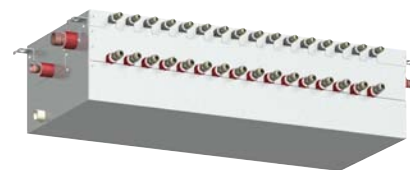
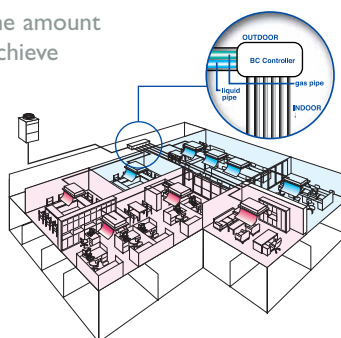
Upper View >



BC Controllers

At the heart of both the R2 and WR2 Series, the BC controller makes simultaneous heating and cooling possible. It has the inherent 'intelligence' to be the system's decision-maker.

- Transferring energy around the system
- Drawing on energy from the heat source units/outdoor units
- Directing energy as requested by the individual indoor units
- Instructs the heat source unit/outdoor unit on the amount of refrigerant (liquid or gas) that is required to achieve the requested cooling or heating requirements
- Allows unique 2-pipe heat recovery application
- HIC Circuit for improved efficiency



Technical Information

BC CONTROLLERS

MODEL REFERENCE		CMB-PI04V-G	CMB-PI05V-G	CMB-PI06V-G
NUMBER OF CONNECTIONS		4	5	6
WEIGHT (kg)		24	27	29
DIMENSIONS (mm)	Width	648	648	648
	Depth	362 + 70	362 + 70	362 + 70
	Height	284	284	284
ELECTRICAL SUPPLY		220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz
PHASE		Single	Single	Single
POWER INPUT (KW)		0.085	0.104	0.123
RUNNING CURRENT (A)		0.36	0.44	0.52
FUSE RATING (BS88) – HRC (A)		6	6	6
MAINS CABLE No. Cores		3	3	3

Note: CMB-P-V-G units are for use with PURY(E)P200-350 YHM-A & PQRY-P200/250YGM-A outdoor units only.

MASTER BC CONTROLLERS

MODEL REFERENCE		CMB-PI08V-GA	CMB-PI010V-GA	CMB-PI013V-GA	CMB-PI016V-GA	CMB-PI016V-HA
NUMBER OF CONNECTIONS		8	10	13	16	16
WEIGHT (kg)		44	49	57	64	73
DIMENSIONS (mm)	Width	1110	1110	1110	1110	1110
	Depth	450 + 70	450 + 70	450 + 70	450 + 70	450 + 70
	Height	289	289	289	289	289
ELECTRICAL SUPPLY		220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz
PHASE		Single	Single	Single	Single	Single
POWER INPUT (KW)		0.161	0.198	0.255	0.312	0.312
RUNNING CURRENT (A)		0.68	0.83	1.07	1.30	1.30
FUSE RATING (BS88) – HRC (A)		6	6	6	6	6
MAINS CABLE No. Cores		3	3	3	3	3

Note: CMB-P-V-GA units are for use with PURY(E)P200-650Y(S)HM-A & PQRY-P200-500YSGM-A outdoor units only. CMB-PI016V-HA unit is for use with PURY-P700-800YSHM-A outdoor units only.

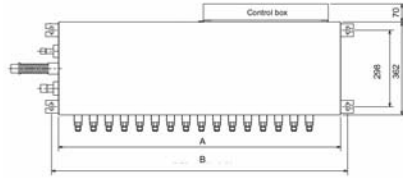
SLAVE BC CONTROLLERS

MODEL REFERENCE		CMB-PI04V-GB	CMB-PI08V-GB	CMB-PI016V-HB
NUMBER OF CONNECTIONS		4	8	16
WEIGHT (kg)		22	32	57
DIMENSIONS (mm)	Width	648	648	1098
	Depth	362 + 70	362 + 70	362 + 70
	Height	284	284	284
ELECTRICAL SUPPLY		220-240v, 50Hz	220-240v, 50Hz	220-240v, 50Hz
PHASE		Single	Single	Single
POWER INPUT (KW)		0.076	0.151	0.301
RUNNING CURRENT (A)		0.32	0.63	1.26
FUSE RATING (BS88) – HRC (A)		6	6	6
MAINS CABLE No. Cores		3	3	3

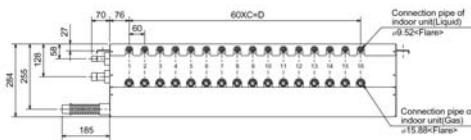
Note: CMB-PI016V-HB can be connected to a CMB-PI016V-HA.

CMB-PI04, I05, I06V-G

Upper View >



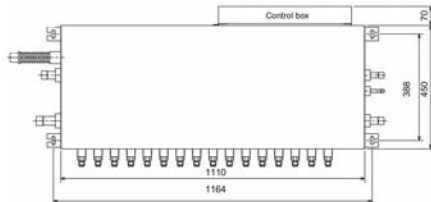
Side View >



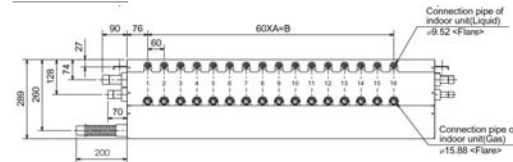
	A	B	C	D
CMB-PI04V-G	648	702	3	180
CMB-PI05V-G			4	240
CMB-PI06V-G			5	300

CMB-PI08, I010, I013, I016V-GA/HA

Upper View >



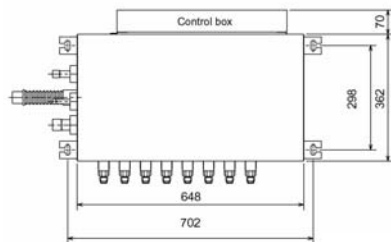
Side View >



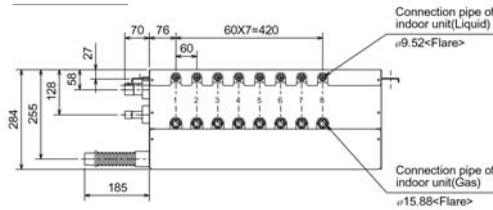
	A	B
CMB-PI08V-GA	7	420
CMB-PI010V-GA	9	540
CMB-PI013V-GA	12	720
CMB-PI016V-GA/HA	15	900

CMB-PI04, I08V-GB

Upper View >



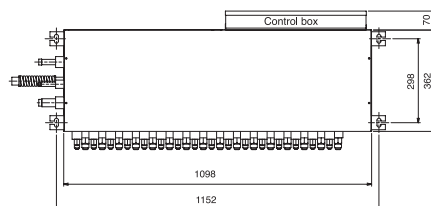
Side View >



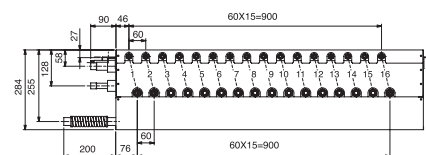
	A	B
CMB-PI04V-GB	3	180
CMB-PI08V-GB	3	420

CMB-PI016V-HB

Upper View >



Side View >



PAC-AH-M-G/H Heat Pump & Cooling Only

Air Handling Unit Controller

The Air Handling Unit Controllers are an interface to allow connection to third party manufacturer equipment.

Mitsubishi Electric City Multi outdoor units can be used with this interface box, creating an ideal solution when a unique air handling unit is required. The Air Handling Unit Controllers are supplied with LEV expansion device(s).



Technical Information

PAC-AH-M-H - HEAT PUMP AHU CONTROLLER

MODEL REFERENCE	PAC-AH125M-H	PAC-AH125M-H	PAC-AH140M-H	PAC-AH250M-H	PAC-AH250M-H
mitsubishi electric outdoor unit	PUHY-(E)P200-1250Y(S)HM-A	PUHY-(E)P200-1250Y(S)HM-A	PUHY-(E)P200-1250Y(S)HM-A	PUHY-(E)P200-1250Y(S)HM-A	PUHY-(E)P200-1250Y(S)HM-A
AIR HANDLING UNIT SIZE	P100	P125	P140	P200	P250
ALLOWED EVAPORATOR CAPACITY (kW) - Heating	10.0 - 12.5	12.5 - 16.0	16.0 - 18.0	18.0 - 25.0	25.0 - 31.5
ALLOWED EVAPORATOR CAPACITY (kW) - Cooling	9.0 - 11.2	11.2 - 14.0	14.0 - 16.0	16.0 - 22.4	22.4 - 28.0
ALLOWED EVAPORATOR VOLUME (cm ³)	1500 - 2850	1900 - 3550	2150 - 4050	3000 - 5700	3750 - 7100
STANDARD EVAPORATOR PATH NUMBER*	4 - 5	4 - 5	5 - 6	6 - 10	8 - 10
DIMENSIONS (mm)					
() = Inc Mountings					
Width	326	326	326	326	326
Depth	117 (132)	117 (132)	117 (132)	117 (132)	117 (132)
Height	410 (430)	410 (430)	410 (430)	410 (430)	410 (430)
WEIGHT (kg)	7	7	7	7	7

PAC-AH-M-G - COOLING ONLY AHU CONTROLLER

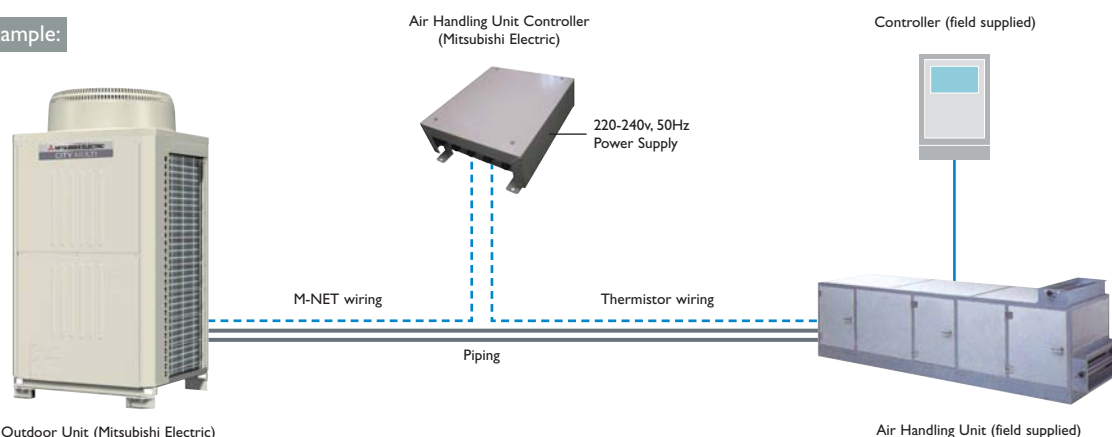
MODEL REFERENCE	PAC-AH140M-G	PAC-AH250M-G	PAC-AH250M-G
mitsubishi electric outdoor unit	PU(H)(R)Y-(E)P200-1250Y(S)HM-A	PU(H)(R)Y-(E)P200-1250Y(S)HM-A	PU(H)(R)Y-(E)P200-1250Y(S)HM-A
AIR HANDLING UNIT SIZE	P140	P200	P250
ALLOWED EVAPORATOR CAPACITY (kW)	11.2 - 16.0	15.9 - 22.4	18.7 - 28.0
ALLOWED EVAPORATOR VOLUME (cm ³)	2150 - 4050	3000 - 5700	3750 - 7100
STANDARD EVAPORATOR PATH NUMBER*	5 - 6	6 - 10	8 - 10
DIMENSIONS (mm)			
() = Inc Mountings			
Width	326	326	326
Depth	117 (132)	117 (132)	117 (132)
Height	382 (420)	382 (420)	382 (420)
WEIGHT (kg)	7	7	7

Note: One air handling unit controller is required per air handling unit

Saturated refrigerant temperature at exit of evaporator = 8.5°C, SH=5K, liquid temperature = 25°C, air = 27°CDB/19°CWB

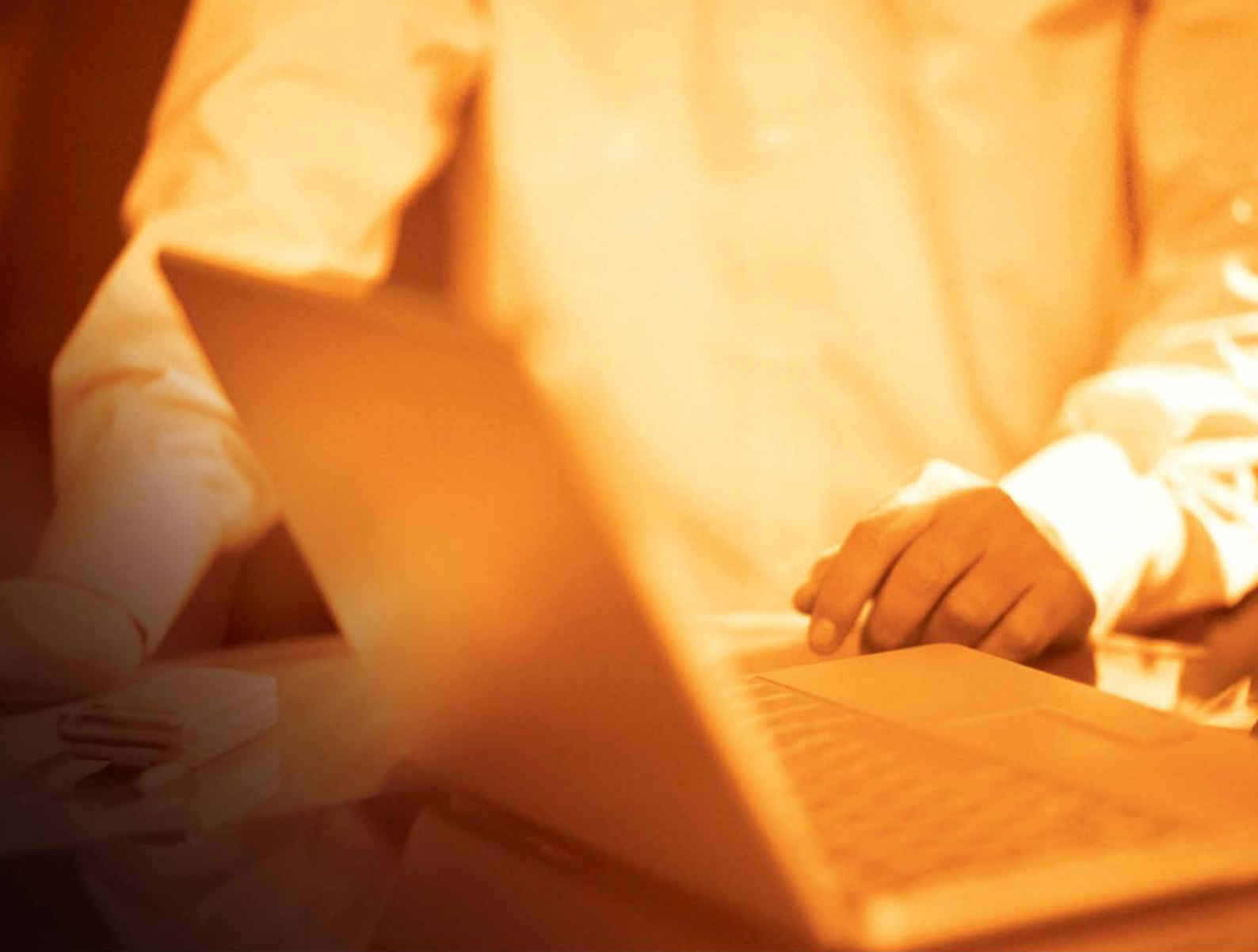
*When the diameter of the heat exchanger tube is ø9.52

Example:



Accessories / Optional Extras

CITYMULTI		
Outdoor Units	CMY-Y102S-G2 CMY-Y102L-G2 CMY-Y202-G2 CMY-Y302-G2 CMY-Y62-G-E CMY-Y100VBK2 CMY-Y200VBK2 CMY-Y300VBK2 CMY-R100VBK CMY-R200VBK ACHI ACOUSTIC KIT	- Branch Pipe (Joint) for size 200 or below - total capacity of indoor units - Branch Pipe (Joint) for size 201-400 - total capacity of indoor units - Branch Pipe (Joint) for size 401-650 - total capacity of indoor units or first branch of P500-P650 - Branch Pipe (Joint) for size 651 or above - total capacity of indoor units or first branch of P700-P1250 - Branch Pipe for 2 branches (PUMY) - Twinning Kit for PUHY-P500-650YSHM-A / PUHY-EP400-650YSHM-A - Twinning Kit for PUHY-P700-900YSHM-A - Twinning Kit for PUHY-P950-1250YSHM-A / PUHY-EP700-900YSHM-A - Twinning Kit for PURY-P500-650YSHM-A / PURY-EP400-600YSHM-A - Twinning Kit for PURY-P700-800YSHM-A - PQFY Auto-Changeover controller - Acoustic kits for PUHY and PURY units
4-Way Blow Cassette Units	PLP-6BA SLP-2AA PLP-6BALM PLP-6BAJ PAC-SAI ME-E PAR-SA9FA-E S70E40714	- Grille for PLFY-P-VBM-E - Grille for PLFY-P-VCM-E - Grille and infra-red controller for PLFY-P-VBM-E - Grille with filter lowering function for PLFY-P-VBM-E - 'I-See Sensor' corner panel for PLFY-P-VBM-E - Infra-red signal receiver for PLFY-P-VBM-E - Infra-red Controller (PAR-SL97A-E) for PLFY-P-VBM-E
2-Way Blow Cassette Units	CMP-P40VLW-B CMP-P63VLW-B CMP-P100VLW-B CMP-P125VLW-B PAC-KH11OF	- Grille for PLFY-P20-40VLMD-E - Grille for PLFY-P50-63VLMD-E - Grille for PLFY-P80-100VLMD-E - Grille for PLFY-P125VLMD-E - OA duct flange for PLFY-P20-100VLMD-E
1-Way Blow Cassette Units	PMP-40BM	- Grille for PMFY-P-VBM-E
Ceiling Concealed Ducted Units	PAC-KE03DM-F PAC-KE04DM-F PAC-KE88LAF PAC-KE89LAF PAC-KE80TB-F PAC-KE140TB-F	- Drain lift-up mechanism for PEFY-P-VMM-E - Drain lift-up mechanism for PEFY-P-VMH-E - Long life filter for PEFY-P80VMH-E - Long life filter for PEFY-P100-140VMH-E - Filter box for PEFY-P80VMH-E (necessary when long life filter is used) - Filter box for PEFY-P100-140VMH-E (necessary when long life filter is used)
BC Controllers	CMY-R160-J CMY-Y102S-G	- Joint pipe - Branch pipe
Indoor Units	PAC-SE41TS-E	- Remote sensor



Controls

A comprehensive range of control options



The importance of

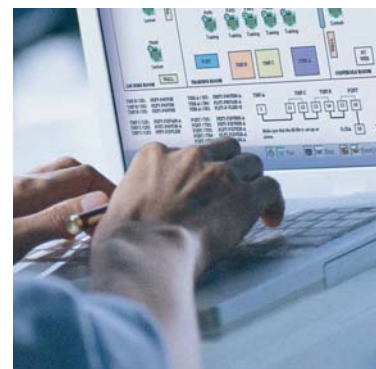
The need for control is paramount in order to optimise the performance of any air conditioning system and minimise its running costs. Mitsubishi Electric offer a wide range of control options designed to do just this.

Operating an air conditioning system without the right control can prove costly. It's therefore important to ensure that every system is correctly specified to the degree of control it requires. Mitsubishi Electric have a wide range of controls available 'off-the-shelf' and where needed, individual control systems can be specifically designed to suit.

Good controls will benefit any application, large or small. Air conditioning products need to react to a variety of factors: different room sizes, usage and staff levels; changes in the climate; electronic equipment and lighting ... the list goes on. So whatever the application, optimum control of air conditioning systems is essential and will result in a constant, comfortable environment, which in turn is both energy and cost efficient.

A degree of difference

When an air conditioning system is not properly controlled, it will not run as efficiently as it should. For every degree that the system deviates from the required temperature, energy costs can rise by up to 5%. Specify one of the many control options from Mitsubishi Electric to ensure air conditioning works as intended, whilst giving the optimum amount of control.



The simpler the better

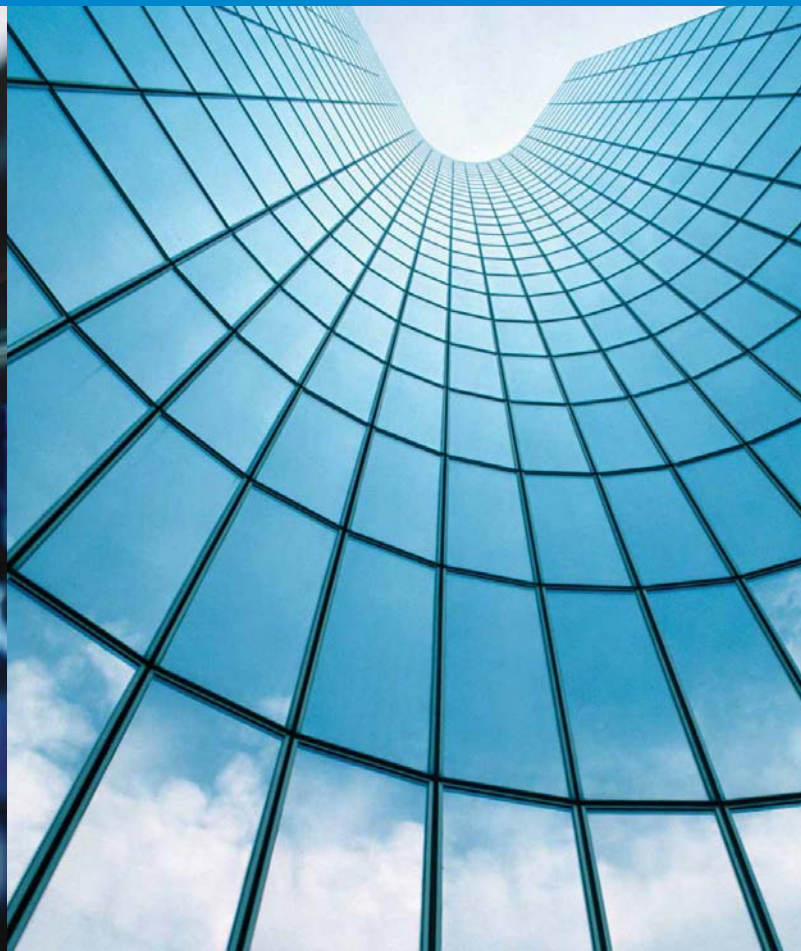
With the array of comprehensive control systems available from Mitsubishi Electric, it becomes simple to design and install air conditioning systems. From a simple hand held controller to a G50 system - you are in control.





Controlled performance

In accordance with the requirements of part L2 in the Building Regulations, our control systems provide the optimum control available, combined with the most efficient use of energy.



A wide range of



Controls options

The need for control is paramount in order



to optimise the performance of any air conditioning



system and minimise its running costs.

Mitsubishi Electric offer a wide range of



control options designed to do just this.



Simple technology at its best

Contents

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Remote Controllers

Our air conditioning systems are supported by a multitude of remote controllers. Each remote controller type, whilst being able to support the general control and monitoring functions for a group of indoor units, can also offer other unique operational features.



PAC-YT51CRA



PAC-SE51CRA



BS-51COV



PC-51COV



PB-51COV



PAR-21MAA



PAR-F27MEA



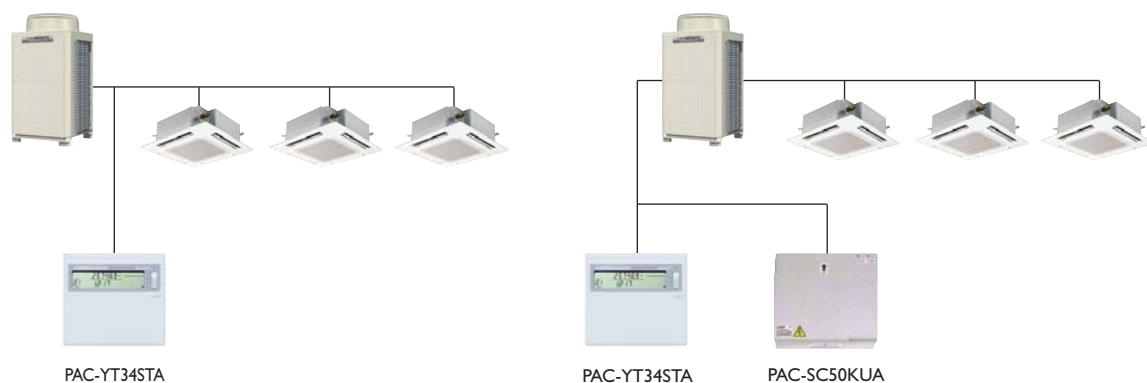
PAR-FL32MA

Technical Information

Remote Controllers											
FUNCTION	DESCRIPTION	PAC-YT51CRA		PAC-SE51CRA		PAR-21MAA		PAR-F27MEA		PAR-FL32MA	
		Operation	Display	Operation	Display	Operation	Display	Operation	Display	Operation	Display
ON/OFF	Run and Stop operation for a single group	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MODE SELECTION	Switches between Cool/Dry/Auto/Fan/Heat. Operation mode will vary depending on the indoor unit. Auto mode is available with only R2 and WR2 systems		✓		✓	✓	✓	✓	✓	✓	✓
TEMPERATURE SETTING	Sets the groups temperature control. Cool/Dry: 19-30°C Heat: 17-28°C Auto: 19-28°C	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
FAN SPEED SETTING	4 speed - Lo-Mi1-Mi2-Hi 2 speed - Lo-Hi	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SETPOINT LIMIT	Limit the setpoint range				✓	✓	✓	✓	✓		
AIRFLOW DIRECTION	Air Flow angles: 100°-80°-60°-40° and auto swing					✓	✓	✓	✓	✓	✓
INDEPENDENT VANE CONTROL	Only available with PLA-RP-BA, PLFY-P-VBM-E and PLFY-P-VCM-E					✓	✓				
TIMER OPERATION	ON/OFF time can be set.					Weekly	Weekly	Daily	Daily	Daily	Daily
PERMIT / PROHIBIT FUNCTION	Run/Stop, Temperature Setting, Mode Selection and Filter Reset functions can be prohibited via a higher level system controller		✓		✓		✓		✓		✓
INDOOR RETURN AIR TEMPERATURE	Measures the intake temperature of the master unit within the group						✓		✓		
ERROR INDICATION	Displays a 4 digit code and the affected unit address		✓		✓		✓		✓		
TEST RUN FUNCTION	Allows each unit within the group to operate in test mode		✓		✓	✓	✓	✓	✓	✓	✓
VENTILATION INTERLOCK	Allows the group to be interlocked with a heat recovery Lossnay unit					✓	✓	✓	✓		
OPTIONAL COVER	Brushed Stainless Steel Polished Chrome Polished Brass		✓ ✓ ✓		✓ ✓ ✓						
CONTACT NUMBER UNDER FAULT CONDITIONS	Displays under fault condition, the fault code of the unit with its address and the contact number to call						✓				
MULTIPLE LANGUAGES	English, Italian, Spanish, French, German, Russian, Chinese and Japanese					✓	✓				
CLOCK DISPLAY	Displays time						✓				
BUTTON LOCK	Able to lock all controller buttons, or all controller buttons except On/Off					✓	✓	✓	✓		
EASY MAINTENANCE WITH MR SLIM	Able to monitor information about the compressor (running current, running time, On/Off time). Also able to monitor sensors: h-exh, outdoor outlet, outdoor temp, indoor inlet, indoor h-exh and filter use number of hours					✓	✓				
RUN / STANDBY WITH MR SLIM	Able to switch over two systems every week. If one fails, the other system starts. If the temperature is too high, the two systems start.					✓	✓				
COMPATIBILITY	Compatible with:	Mr Slim or M Series (via MAC-397IF)		City Multi		Mr Slim or M Series (via MAC-397IF)		City Multi		City Multi, Mr Slim or M Series (via MAC-397IF)	
DIMENSIONS - mm (WxDxH)		120x41x70		120x41x70		130x19x120		130x19x120		157x18x57	

Programmable Timer

Mitsubishi Electric controllers are complimented by a weekly programmable timer, being able to control up to fifty indoor units. The PAC-YT34STA also has hardwired connection available (On/Off input, fire alarm input, run output, fault output).



Technical Information

Programmable Timer			
FUNCTION	DESCRIPTION	PAC-YT34STA	
UNITS	Max No. of Indoor Units	50 units/50 groups	50 units/50 groups
		Operation	Display
ON/OFF	Run and Stop operation	✓	✓
MODE SELECTION	Switches between Cool / Heat	✓	✓
TEMPERATURE SETTING	Sets the groups temperature control. Cool/Dry: 19-30°C Heat: 17-28°C Auto: 19-28°C	✓	✓
CURRENT TIME	Set the time	✓	✓
ERROR INDICATION	Displays a 4 digit code and the affected unit address		✓
EXTERNAL INPUT	Hardwired connections available	On/Off or Fire Alarm	
EXTERNAL OUTPUT	Hardwired connections available		Run/Faults
COMPATIBILITY	Compatible with:	City Multi or Mr Slim via PAC-SF80MA or M Series via MAC-399IF	
DIMENSIONS - mm (WxDxH)		130x19x120	

NOTE: Units can only be controlled from the scheduling options. When the remote On/Off hardwired input is used, the On/Off remote controller buttons will be deactivated (centrally controlled).

System Controller

One system controller is available for use when you need to control up to fifty indoor units from one location. The PAC-SF44SRA also has hardwired connection available (On/Off input, fire alarm input, run output, fault output).



Technical Information

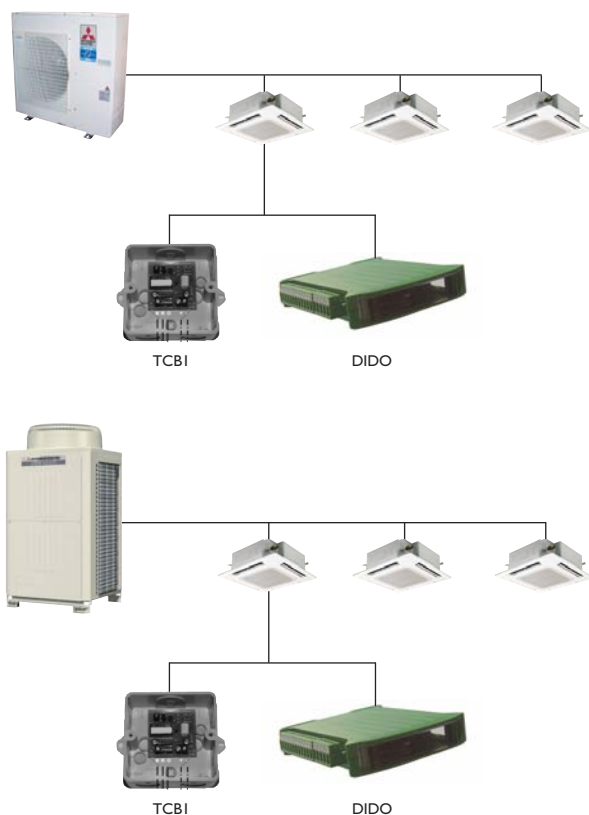
System Controller

FUNCTION	DESCRIPTION	PAC-SF44SRA	
UNITS	Max No. of Indoor Units	50 units/50 groups	50 units/50 groups
		Operation	Display
ON/OFF	Run and Stop operation	✓	✓
MODE SELECTION	Switches between Cool/Dry/Auto/Fan/Heat. Operation Mode will vary depending on the indoor unit. Auto mode is available with only R2 and WR2 systems	✓	✓
TEMPERATURE SETTING	Sets the groups temperature control. Cool/Dry: 19-30°C Heat: 17-28°C Auto: 19-28°C	✓	✓
FAN SPEED SETTINGS	4 speed - Lo-Mi1-Mi2-Hi 2 speed - Lo-Hi	✓	✓
AIR FLOW DIRECTION	Air Flow angles: 100°-80°-60°-40° and auto swing	✓	✓
PERMIT/PROHIBIT FUNCTION	Run/Stop, Temperature Setting, Mode Selection and Filter Reset functions can be prohibited	✓	✓
INDOOR RETURN AIR TEMPERATURE	Measures the intake temperature of the master unit within the group		✓
ERROR INDICATION	Displays a 4 digit code and the affected unit address		✓
VENTILATION INTERLOCK	Allows the group to be interlocked with a heat recovery Lossnay unit	✓	✓
EXTERNAL INPUT	Hardwired connections available	On/Off or Fire Alarm	
EXTERNAL OUTPUT	Hardwired connections available		Run/Faults
COMPATIBILITY	Compatible with:	City Multi or Mr Slim via PAC-SF80MA or M Series via MAC-399IF	
DIMENSIONS - mm (WxDxH)		130x19x120	

NOTE: When the remote On/Off hardwired input is used, the On/Off remote controller buttons will be deactivated (centrally controlled).

Interfaces

A range of newly created interfaces are now available for use when connecting to third party controllers.



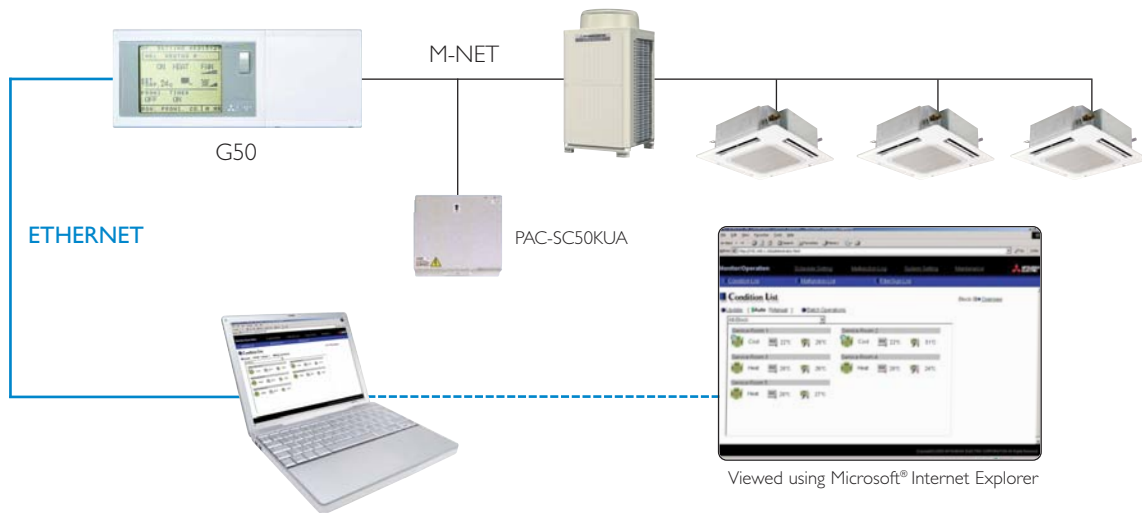
Technical Information

Interfaces					
FUNCTION	DESCRIPTION	TCBI		DIDO	
		Control	Monitor	Control	Monitor
ON/OFF BUT CENTRALLY CONTROLLED	ON/OFF control. Remote controller ON/OFF button deactivated			✓	✓
ON/OFF BUT NOT CENTRALLY CONTROLLED	ON/OFF control. Remote controller ON/OFF button activated	✓	✓	✓	✓
TEMPERATURE SETTINGS	Sets the groups temperature control. Cool/Dry: 19-30°C Heat: 17-28°C Auto: 19-28°C				✓ (analogue 0 to 10VDC)
ERROR INDICATION				✓	✓
HEATING INTERLOCKING	A supplied remote sensor is installed on the wet system radiator to prevent the air conditioning running while heating				
COMPATIBILITY	Interface compatible with:	Mr Slim City Multi		Mr Slim City Multi	
DIMENSIONS - mm (WxDxH)		80x45x80		130x19x120	

G50 Controller

Centralised Controller with WebServer Capabilities

The G50 centralised controller was the first of its kind in the industry to utilise Ethernet Technology. By using Internet Explorer as its local or remote software, the G50 gives you instant access to all your control functions from the comfort of your own PC. The G50 can control up to 50 indoor units and can take the place of local remote controllers, offering the same level of monitoring and control. The G50 has many functions as standard but can also have further features activated via Pin Codes.



Technical Information

G50 Controller	
FUNCTION	DESCRIPTION
OPERATION PLATFORM	Pentium III, CPU 1000 Mhz, 256 MB RAM, 6GB or more. Internal LAN 10/100 MBps running WWindows Professional 2000 service pack 4 or Windows Professional XP service pack 2 or Windows Vista
MAX No. OF INDOOR UNITS	Up to 50 indoor units can be connected
ON/OFF	Run and Stop operation for a single group
MODE SELECTION	Switches between Cool/Dry/Auto/Fan/Heat. Operation Mode will vary depending on the indoor unit. Auto mode is available with only R2 and WR2 systems
TEMPERATURE SETTING	Sets the groups temperature control. Cool/Dry: 19-30°C, Heat: 17-28°C, Auto: 19-28°C
FAN SPEED SETTING	4 speed: Lo-Mi1-Mi2-Hi, 2 speed: Lo-Hi
AIR FLOW DIRECTION	Air Flow angles: 100°-80°-60°-40° and auto swing
TIMER OPERATION	Weekly. Maximum of 3 time sequences with 3 Start/Stop times per day for all groups can be allocated
PERMIT/PROHIBIT FUNCTION	Individual prohibit operations for each remote controller function (Run/Stop, Temperature Setting, Mode Selection and Filter Reset) can be activated
INDOOR RETURN AIR TEMPERATURE	Displays the measured intake temperature from each group
ERROR INDICATION	Displays a 4 digit code and the affected unit address. An error log is held showing the last 64 date stamped alarms
TEST RUN FUNCTION	Allows each unit within the group to operate in test mode
VENTILATION INTERLOCK	Allows the group to be interlocked with a heat recovery Lossnay unit
WEB SETPOINT LIMIT	Reduce the setpoint band of each individual unit (e.g. 23°C to 25°C)
WEB AUTO CHANGEOVER	Automatically switch heat pump outdoor unit to cooling or heating mode depending on the requirements
WEB INITIAL SETTING	Commission the G50 from the web pages
WEB LOGIN	Administrator able to allow specific function access to guest
EXTERNAL INPUT/OUTPUT	Hardwired connections are available for : Inputs: Level Signal-Batch Start/Stop, Batch Emergency Stop Outputs: Start/Stop Status, Error/Normal Status
POWER SUPPLY PACK	PAC-SC50KUA
COMPATIBILITY	City Multi or Mr Slim via PAC-SF80MA or M Series via MAC-399IF
DIMENSIONS - mm (WxDxH)	300x79x120

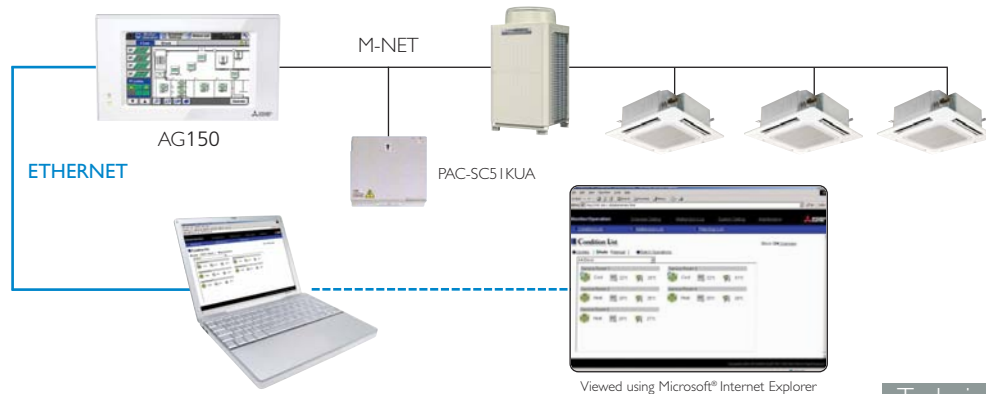
G50 Software Options - Pin Code Activation			
G50 - Web Monitor	Control and Monitor the G50 via Internet Explorer	G50 - ES	Energy Saving Capability
G50 - Email	Enable E-mail activation on fault conditions	G50 - PC	Peak Cut Control
G50 - AS	Weekly / Annual Scheduling and Night Set Back	G50 - VRC	Virtual Remote Controllers
G50 - EC	Energy Charge		

AG150 Controller

NEW in September 2008

Touch Screen Centralised Controller with WebServer Capabilities

The new AG150 Mitsubishi Electric centralised controller offers a large 9 inch touch screen display with easy control of up to 50 indoor units. The AG150 can calculate the energy used for each system, zone or indoor unit. The refrigerant status check function can be activated regularly (in conjunction with the new YHM-A City Multi range) and an Internet connection with SSL security is also available to monitor and control the AG150 remotely and receive Email under fault conditions.



Technical Information

Controls Range 2008

G50 Controller / AG150 Controller

AG150 Controller	
FUNCTION	DESCRIPTION
TOUCH SCREEN	Wide high resolution 9" touch screen
OPERATION PLATFORM	Pentium III, CPU 1000 Mhz, 256 MB RAM, 6GB or more. Internal LAN 10/100 MBps running Windows Professional 2000 service pack 4 or Windows Professional XP service pack 2 or Windows Vista
MAX No. OF INDOOR UNITS	Up to 50 indoor units can be connected
ON/OFF	Run and Stop operation for a single group
MODE SELECTION	Switches between Cool/Dry/Auto/Fan/Heat. Operation Mode will vary depending on the indoor unit. Auto mode is available with only R2 and WR2 systems
TEMPERATURE SETTING	Sets the groups temperature control. Cool/Dry: 19-30°C, Heat: 17-28°C, Auto: 19-28°C
FAN SPEED SETTING	4 speed: Lo-Mi1-Mi2-Hi, 2 speed: Lo-Hi
AIR FLOW DIRECTION	Air Flow angles: 100°-80°-60°-40° and auto swing
TIMER OPERATION	Annual or weekly. Night set back option available allowing the setpoint to be set to 12°C
PERMIT/PROHIBIT FUNCTION	Individual prohibit operations for each remote controller function (Run/Stop, Temperature Setting, Mode Selection and Filter Reset) can be activated
INDOOR RETURN AIR TEMPERATURE	Displays the measured intake temperature from each group
ERROR INDICATION	Displays a 4 digit code and the affected unit address. An error log is held showing the last 64 date stamped alarms
TEST RUN FUNCTION	Allows each unit within the group to operate in test mode
VENTILATION INTERLOCK	Allows the group to be interlocked with a heat recovery Lossnay unit
WEB SETPOINT LIMIT	Reduce the setpoint band of each individual unit (e.g. 23°C to 25°C)
WEB AUTO CHANGEOVER	Automatically switch heat pump outdoor unit to cooling or heating mode depending on the requirements
WEB INITIAL SETTING	Commission the G50 from the web pages
WEB LOGIN	Administrator able to allow specific function access to guest
WEB REFRIGERANT STATUS CHECK	Activate refrigerant volume checking function on Modular City Multi systems
ENERGY CHARGING	Able to create bills for individual indoor units, groups of indoor units or a complete system (Optional) via the PAC-YG60MCA
ENERGY SAVE CONTROL	Individual indoor unit, group of indoor units or a complete system can be controlled. There are various energy saving options available (Optional)
LOAD SHEDDING	Activate energy saving mode when energy consumption is too high
EXTERNAL INPUT/OUTPUT	Hardwired connections are available for : Inputs: Level Signal-Batch Start/Stop, Batch Emergency Stop Outputs: Start/Stop Status, Error/Normal Status
POWER SUPPLY PACK	PAC-SCS1KUA
COMPATIBILITY	City Multi or Mr Slim via PAC-SF80MA or M Series via MAC-399IF
DIMENSIONS - mm (WxDxH)	300x62x175

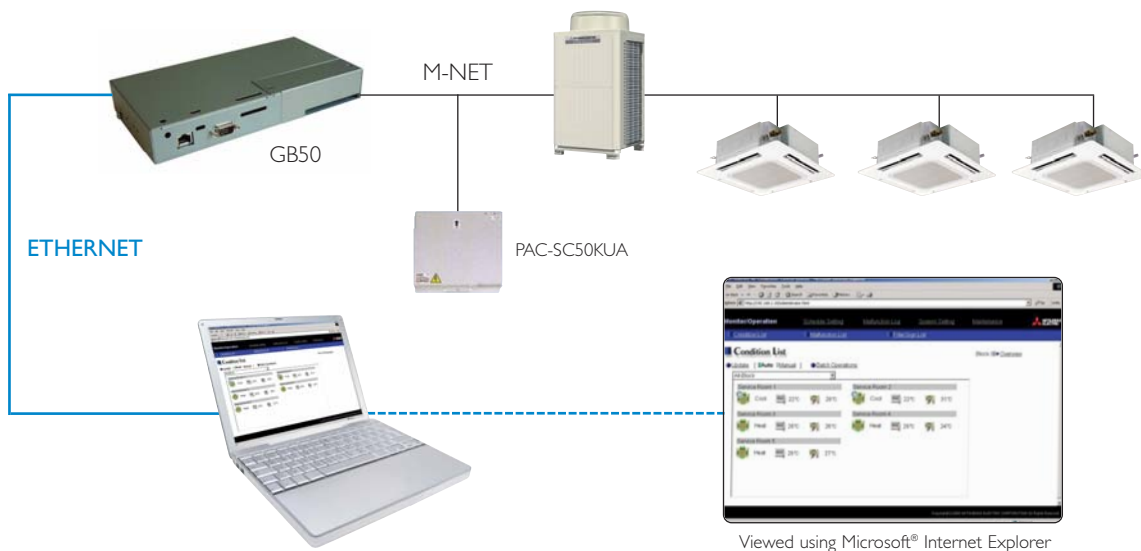
AG150 Software Options - Pin Code Activation

AG150 - Basic	Web monitoring, Email, Annual scheduling
AG150 - Energy	Energy monitoring, energy saving, load shedding
AG150 - VRC	Virtual remote controllers

GB50 Controller

Centralised Controller with WebServer Capabilities

The GB50 has been developed to access all your control functions from the comfort of your own PC, without the need for a controller keypad or LCD display and at a very competitive price.



Technical Information

GB50 Controller	
FUNCTION	DESCRIPTION
OPERATION PLATFORM	Pentium III, CPU 1000 Mhz, 256 MB RAM, 6GB or more. Internal LAN 10/100 MBps running Windows Professional 2000 service pack 4 or Windows Professional XP service pack 2 or Windows Vista
MAX No. OF INDOOR UNITS	Up to 50 indoor units can be connected
ON/OFF	Run and Stop operation for a single group
MODE SELECTION	Switches between Cool/Dry/Auto/Fan/Heat. Operation Mode will vary depending on the indoor unit. Auto mode is available with only R2 and WR2 systems
TEMPERATURE SETTING	Sets the groups temperature control. Cool/Dry: 19-30°C, Heat: 17-28°C, Auto: 19-28°C
FAN SPEED SETTING	4 speed: Lo-Mi1-Mi2-Hi, 2 speed: Lo-Hi
AIR FLOW DIRECTION	Air Flow angles: 100°-80°-60°-40° and auto swing
TIMER OPERATION	Annual or weekly. Night set back option available allowing the setpoint to be set down to 12°C
PERMIT/PROHIBIT FUNCTION	Individual prohibit operations for each remote controller function (Run/Stop, Temperature Setting, Mode Selection and Filter Reset) can be activated
INDOOR RETURN AIR TEMPERATURE	Displays the measured intake temperature from each group
ERROR INDICATION	Displays a 4 digit code and the affected unit address. An error log is held showing the last 64 date stamped alarms
TEST RUN FUNCTION	Allows each unit within the group to operate in test mode
VENTILATION INTERLOCK	Allows the group to be interlocked with a heat recovery Lossnay unit
WEB SETPOINT LIMIT	Reduce the setpoint band of each individual unit (e.g. 23°C to 25°C)
WEB AUTO CHANGEOVER	Automatically switch heat pump outdoor unit to cooling or heating mode depending on the requirements
WEB INITIAL SETTING	Commission the GB50 from the web pages
WEB LOGIN	Administrator able to allow specific function access to guest
EXTERNAL INPUT/OUTPUT	Hardwired connections are available for : Inputs: Level Signal-Batch Start/Stop, Batch Emergency Stop Outputs: Start/Stop Status, Error/Normal Status
POWER SUPPLY PACK	PAC-SC50KUA
COMPATIBILITY	City Multi or Mr Slim via PAC-SF80MA or M Series via MAC-399IF
DIMENSIONS - mm (WxDxH)	250x38x130

GB50 Software Options - Pin Code Activation

G50 - EC	Energy Charge
G50 - ES	Energy Saving Capability
G50 - PC	Peak Cut Control
G50 - VRC	Virtual Remote Controllers

G50/AG150/GB50 Controller Web Screenshots

Login



Access to the web pages is secured using a customised username and password.

Monitor Air Conditioning - Block view



Each area of the building can be displayed with information about On/Off, Setpoint, Mode and Temperature.

Daily, Weekly and Annual Scheduling (AS PIN code)



Scheduling may be set from the web pages. A night set back operation is available (Heat, 12°C). Optional on the G50, standard on the AG150/GB50.

Multiple Users (VRC PIN code)



If the G50/AG150/GB50 is connected to an office LAN, the staff will then be able to access the web pages. With VRC each member of staff will have their own username and password.

Monitor Air Conditioning - Overview



The first screen allows you to monitor all the units connected to the G50/AG150/GB50. Each icon displays On/Off, Faults and timer On/Off.

Remote Controller Settings



Click on any icons in the MonitorView page to access the remote controller. Lossnay units can also be controlled. Buttons on the local controllers may be locked (On/Off, Mode, Setpoint, Filter Reset).

Monitor Fault Codes



Faults with the unit address can be displayed under fault conditions. Email status can also be shown.

Multiple Users (VRC PIN code)



Installation costs will be reduced as no wall remote controllers will need to be purchased and installed.

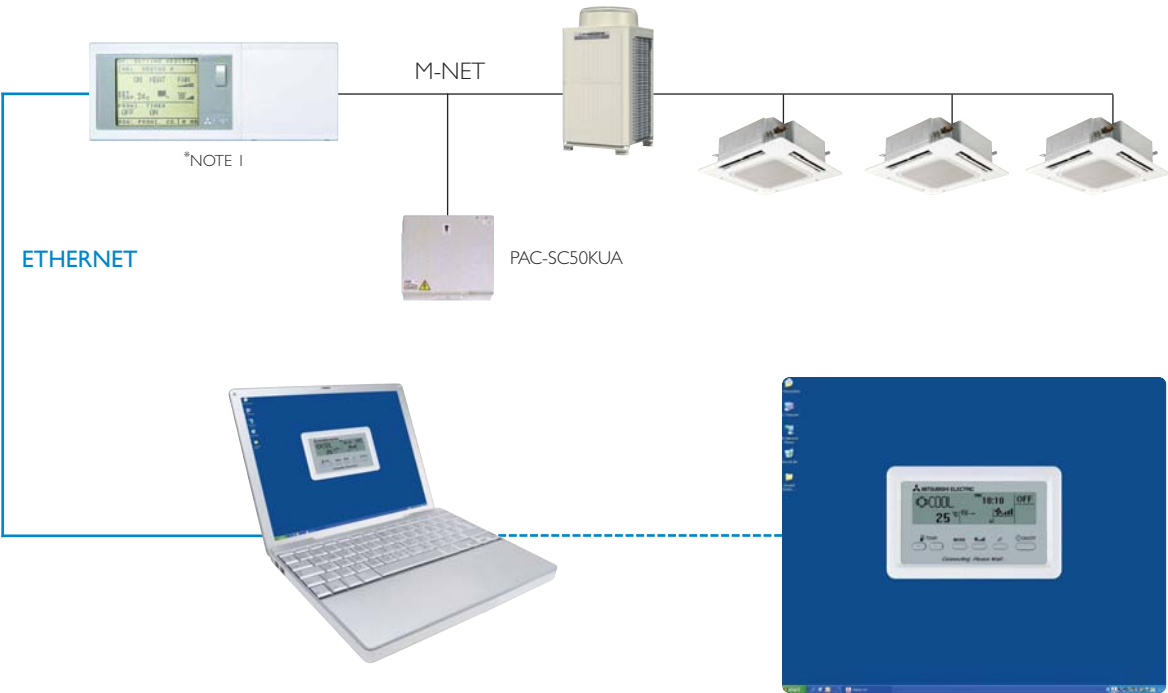
New icons now available to suit model type installed.



G50/AG150/GB50

Desktop Remote Controller

More and more customers are using the G50/GB50 controller directly from their computers, so Mitsubishi Electric has launched a new, even simpler alternative which presents the customer with what looks like a standard remote controller interface - on their PC desktop. Called the PAR-21PC, the new application can also be minimised in the Desktop Toolbar, just like other Windows applications, so that the customer can have immediate control with just one click of the mouse.



Technical Information

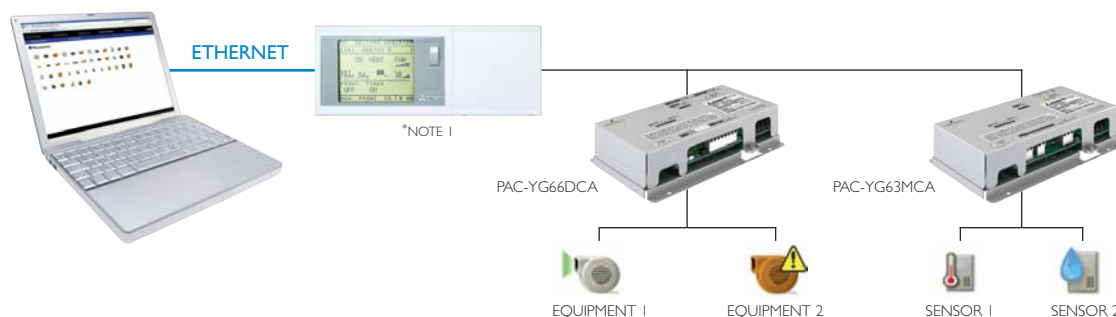
PAR-21PC Desktop Remote Controller	
FUNCTION	DESCRIPTION
OPERATION PLATFORM	Pentium III, CPU 1000 Mhz, 256 MB RAM, 6GB or more. Internal LAN 10/100 MBps running Windows Professional 2000 service pack 4 or Windows Professional XP service pack 2 or Windows Vista
MAX No. OF INDOOR UNITS	Up to 16 indoor units within a group
ON/OFF	Run and Stop operation for a single group
MODE SELECTION	Switches between Cool/Dry/Auto/Fan/Heat. Operation Mode will vary depending on the indoor unit. Auto mode is available with only R2 and WR2 systems
TEMPERATURE SETTING	Sets the groups temperature control. Cool/Dry: 19-30°C, Heat: 17-28°C, Auto: 19-28°C
FAN SPEED SETTING	4 speed: Lo-Mi1-Mi2-Hi, 2 speed: Lo-Hi
AIR FLOW DIRECTION	Air Flow angles: 100°-80°-60°-40° and auto swing
CLOCK DISPLAY	Displays the time on the desktop controller
INDOOR RETURN AIR TEMPERATURE	Displays the measured intake temperature from each group
ERROR INDICATION	Displays a 4 digit code and the affected unit address.
TIMER OPERATION	Weekly. Maximum of 3 time sequences with 3 Start/Stop times per day for all groups can be allocated

*NOTE I: Applicable with G50 / PAC-SC50KUA or AG150 / PAC-SC51KUA or GB50 / PAC-SC50KUA

G50/AG150/GB50

Third Party Equipment Interfaces

The new third party equipment interfaces allow the user to monitor and control third party equipment from the G50/GB50 web pages.



Technical Information

Third Party Interfaces

FUNCTION	DESCRIPTION	PAC-YG66DCA	PAC-YG63MCA
MAX No. OF INPUTS	-	2 x Digital	2 x Analogue
MAX No. OF OUTPUTS	-	2 x Digital	-
MAX No. OF EQUIPMENT	-	2	-
POWER SUPPLY	Power supply required	24VDC	24VDC
MONITOR	From G50/GB50 web pages or TG2000	Run / Faults	Temperature / Humidity
CONTROL	From G50/GB50 web pages or TG2000	On/Off	-
SIGNAL	Signal required to monitor and control equipment	Volt free contact	Temperature 4-20mA / I-5V / 0-10V / Pt100 Humidity 4-20mA / I-5V / 0-10V
DIMENSIONS - mm (WxDxH)	-	200x45x120	200x45x120

General Equipment



Third party equipment can be monitored and controlled from the web pages.

Temperature / Humidity



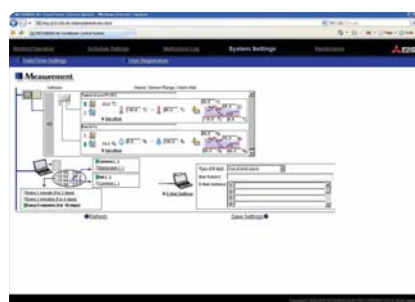
Temperature and humidity can be monitored.

Trend Logging



Temperature and humidity can be recorded and displayed.

Temperature / Humidity Limit



Limit (high and low) can be set to trigger alarms via email.

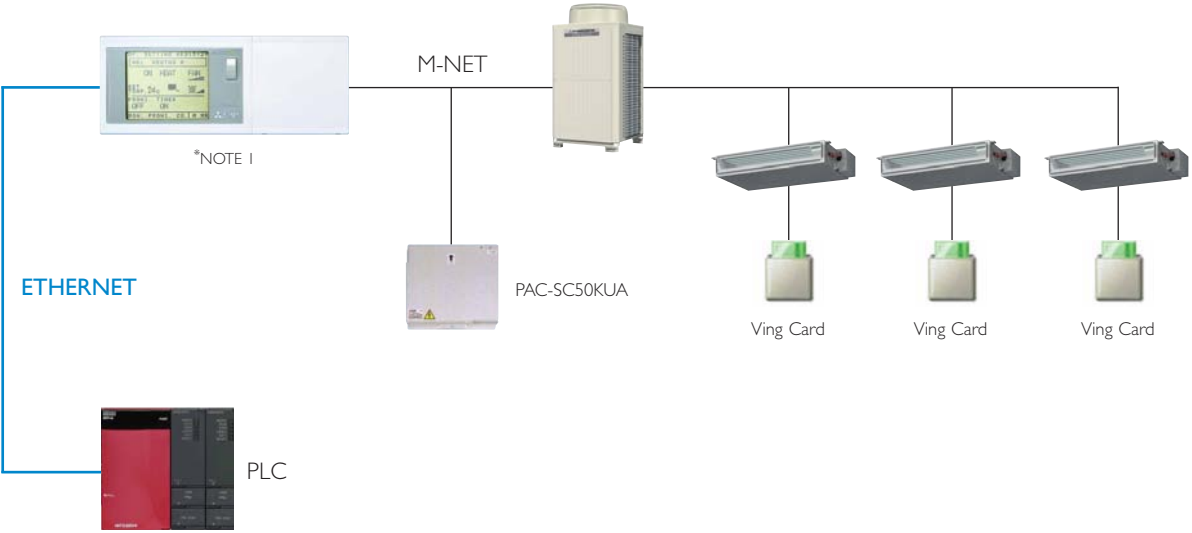
*NOTE 1: Applicable with G50 / PAC-SC50KUA or AG150 / PAC-SC51KUA or GB50 / PAC-SC50KUA

NOTE 2: Temperature Sensors and Humidity Sensors not supplied by MEUK

G50/AG150/GB50

Programmable Logic Controller

The PLC controller allows a hotel (for example) to have more accurate control over its air conditioning. The PLC works in conjunction with the key card system installed in each bedroom in many hotels. When the room is occupied, the PLC will switch ON the unit and reset the air conditioning to predetermined settings (for instance AUTO, 21°C). When the room is unoccupied, the PLC will monitor the temperature in the room. If the temperature is too low or too high, the PLC will restart the unit.



Technical Information

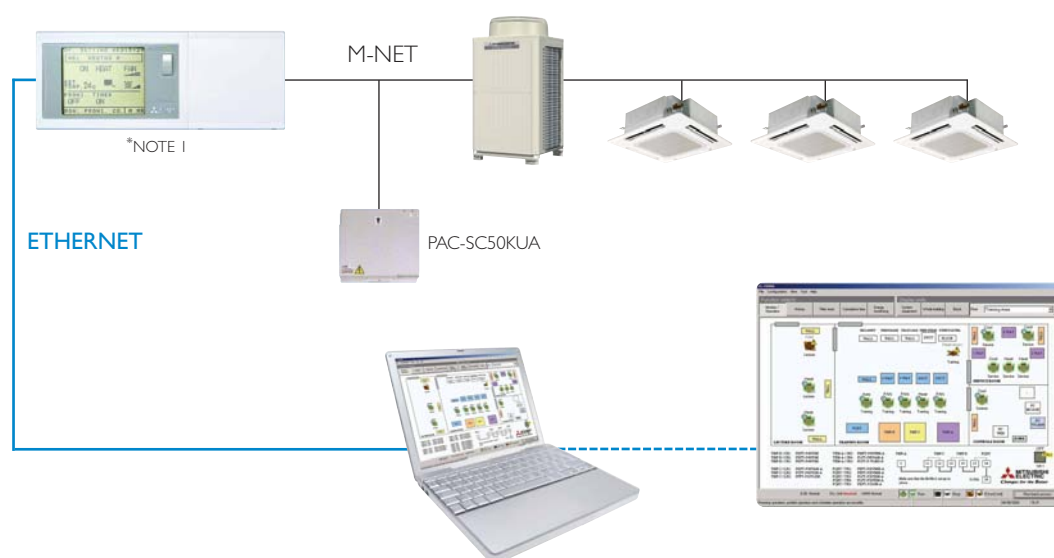
PLC-QSERIES-LSPD	
FUNCTION	DESCRIPTION
MAX No. OF INDOOR UNITS	Up to 200 indoor units
ON/OFF	Run and Stop operation for a single group
MODE SELECTION	Switches between Cool/Dry/Auto/Fan/Heat. Operation Mode will vary depending on the indoor unit. Auto mode is available with only R2 and WR2 systems
TEMPERATURE SETTING	Sets the groups temperature control. Cool/Dry: 19-30°C, Heat: 17-28°C, Auto: 19-28°C
PERMIT/PROHIBIT SETTING	Individual prohibit operations for each remote controller function (Run/Stop, Temperature Setting, Mode Selection and Filter Reset) can be activated
OCCUPIED ROOM SETTING	ON, AUTO, 21°C (Factory setting)
UNOCCUPIED ROOM SETTING	<div> <p>If the temperature is below 16°C the PLC restarts the unit to ON, HEAT, 19°C and stops the unit when the temperature has reached 18°C (Factory setting)</p> <p>If the temperature is above 26°C the PLC restarts the unit to ON, COOL, 21°C and stops the unit when the temperature has reached 24°C (Factory setting)</p> </div>
COMPATIBILITY	City Multi only
DIMENSIONS - mm (WxDxH)	198x44x98

*NOTE 1: Applicable with G50 / PAC-SC50KUA or AG150 / PAC-SC51KUA or GB50 / PAC-SC50KUA
 NOTE 2: It may take up to 3 minutes to switch ON the indoor unit (this time depends on how many indoor units are connected to the PLC).

TG2000 Software

PC Based Software Package

The TG2000 centralised PC based graphical software package allows the operator to control and monitor up to a maximum of 2000 indoor units. This software has been designed to connect directly to an air conditioning system via the G50/GB50 controller; allowing the operator the required functionality to control and monitor the complete air conditioning system from a central location.



Technical Information

TG2000 PC Based software that works in conjunction with G50/GB50 Controller

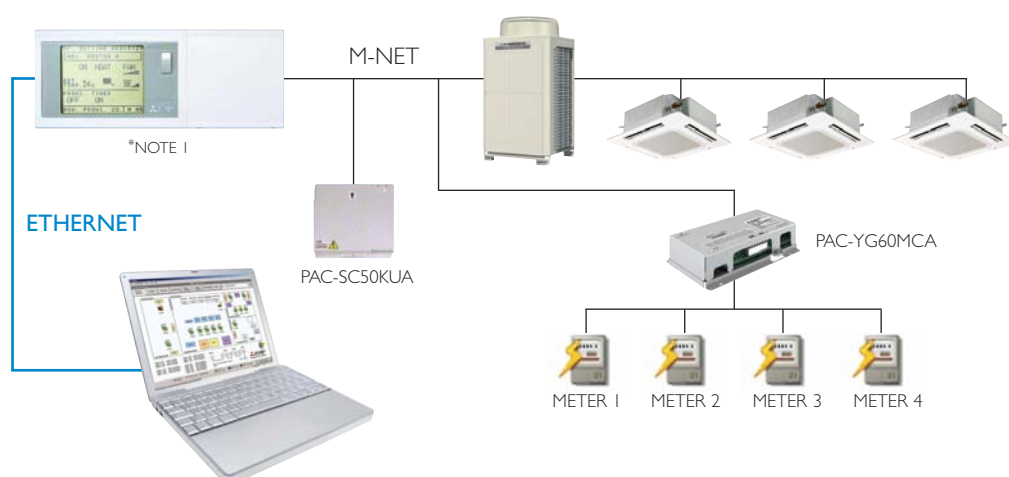
FUNCTION	DESCRIPTION
OPERATING PLATFORM	Pentium III, CPU 1000 Mhz, 256 MB RAM, 6GB or more. Internal LAN 10/100 MBps running Windows Professional 2000 service pack 4 or Windows Professional XP service pack 2 or Windows Vista
MAX No. OF INDOOR UNITS	2000 Indoor units, 50 indoor units per G50/AG150/GB50
OPERATIONAL SECTIONS	The software package is split into two distinctive areas, System and Controls setting. System Setting: Password protected, System Configuration and group/block organisation, printer setting. Controls Setting: Normal Operation, monitoring and control functions as described below. The software allows individual indoor units to be allocated to logical groups, represented within user definable graphics screens, allocated during the system configuration
ON/OFF	Indicates the On/Off status of each group within the selected graphical screen or entire building
OPERATION MODE	Indicates the operational mode (Cool, Heat, Fan, Dry, Auto) for each group on the selected graphical screen
SET TEMPERATURE	Displays the set temperature for each group on the selected graphical screen. Also able to limit the set point range in both heating and cooling mode
AIR SPEED	Displays the current fan speed setting for each group on the selected graphical screen
REMOTE CONTROLLER PROHIBIT/PERMIT	Displays the current prohibit/permit status for each groups remote controller on the selected graphical screen
ABNORMALITY (FAULT) MONITORING	Individual indoor unit fault monitoring is recorded within the fault log for both viewing and printing. Fault monitoring can also be viewed via the fault log for all units associated with a particular graphical screen or the entire building. Faults can also be tracked and printed using date of failure, date of recovery and error code
ROOM TEMPERATURE MONITORING	Displays the return air temperature of the master indoor unit within a group
SCHEDULED ON/OFF	On/Off schedules can be set for each group, each graphical screen or the entire building
ENERGY SAVE CONTROL	Individual indoor unit, group of indoor units or a complete system can be controlled. There are various energy saving options available (Optional)
TREND LOGGING	Able to log: Return air temperature, setpoint, mode, On/Off, power consumption by group or by indoor unit, watt-hour meter and then email to customer
GRAPHICAL SCREENS	The complete system configurations can be allocated between multiple screens. Each screen can display a bitmap image representing the area of the building or floor where the units or groups are physically located
EMAIL	The following information may be sent regularly and automatically via email: energy monitoring data, energy saving data, trend logging data (temperatures etc) and fault code history

*NOTE 1: Applicable with G50 / PAC-SC50KUA or AG150 / PAC-SC51KUA or GB50 / PAC-SC50KUA

TG2000 Software with Energy Monitoring

PC Based Software Package

The TG2000 centralised PC based graphical software package allows the operator to control and monitor up to a maximum of 2000 indoor units. This software has been designed to connect directly to an air conditioning system via G50/GB50 controller; allowing the operator all the required functionality to control and monitor the complete air conditioning system from a central location. In addition to providing a centralised control facility, the TG2000 allows complete energy consumption data to be logged with user definable billing groups and electrical tariffs for billing purposes.



Technical Information

TG2000 Software with Energy Monitoring

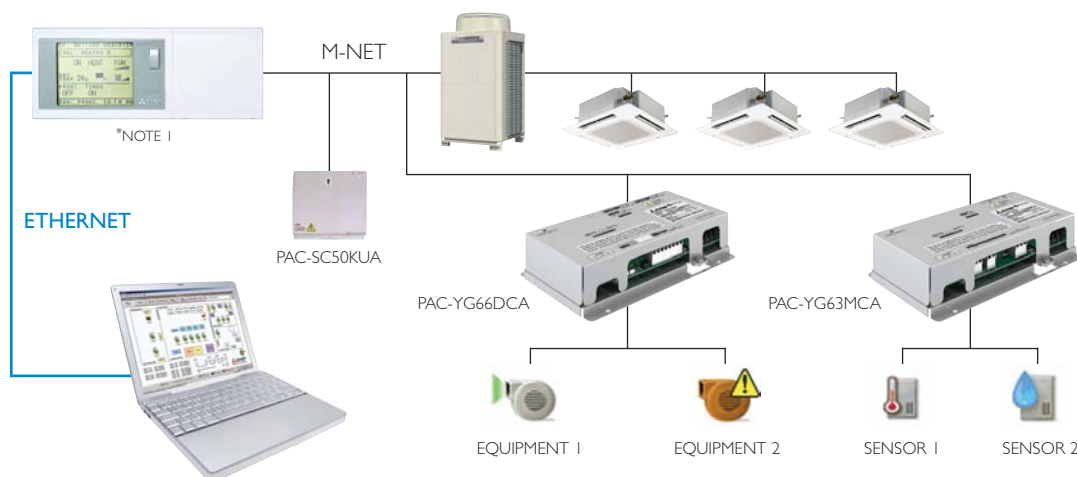
FUNCTION	DESCRIPTION
OPERATING PLATFORM	Pentium III, CPU 1000 Mhz, 256 MB RAM, 6GB or more. Internal LAN 10/100 MBps running Windows Professional 2000 service pack 4 or Windows Professional XP service pack 2 or Windows Vista
MAX No. OF INDOOR UNITS	2000 Indoor units, 50 indoor units per G50/AG150/GB50
OPERATIONAL SECTIONS	The software package is split into two distinctive areas, System and Controls setting. System Setting: Password protected, System Configuration and group/block organisation, printer setting. Controls Setting: Normal Operation, monitoring and control functions as described below. The software allows individual indoor units to be allocated to logical groups, represented within user definable graphics screens, allocated during the system configuration
ON/OFF	Indicates the On/Off status of each group within the selected graphical screen or entire building
OPERATION MODE	Indicates the operational mode (Cool, Heat, Fan, Dry, Auto) for each group on the selected graphical screen
SET TEMPERATURE	Displays the set temperature for each group on the selected graphical screen. Also able to limit the set point range in both heating and cooling mode
AIR SPEED	Displays the current fan speed setting for each group on the selected graphical screen
REMOTE CONTROLLER PROHIBIT/PERMIT	Displays the current prohibit/permit status for each groups remote controller on the selected graphical screen
ABNORMALITY (FAULT) MONITORING	Individual indoor unit fault monitoring is recorded within the fault log for both viewing and printing. Fault monitoring can also be viewed via the fault log for all units associated with a particular graphical screen or the entire building. Faults can also be tracked and printed using date of failure, date of recovery and error code
ROOM TEMPERATURE MONITORING	Displays the return air temperature of the master indoor unit within a group
SCHEDULED ON/OFF	On/Off schedules can be set for each group, each graphical screen or the entire building
ENERGY CHARGING	Able to create or email bills for individual indoor units, groups of indoor units or a complete system (Optional) via the PAC-YG60MCA
WEB REFRIGERANT STATUS CHECK	Activate refrigerant volume checking function on Modular City Multi systems
ENERGY CHARGING	Able to create bills for individual indoor units, groups of indoor units or a complete system (Optional) via the PAC-YG60MCA
ENERGY SAVE CONTROL	Individual indoor unit, group of indoor units or a complete system can be controlled. There are various energy saving options available (Optional)
LOAD SHEDDING	Activate energy saving mode when energy consumption is too high
TREND LOGGING	Able to log: Return air temperature, setpoint, mode, On/Off, power consumption by group or by indoor unit, watt-hour meter and then email to customer
GRAPHICAL SCREENS	The complete system configurations can be allocated between multiple screens. Each screen can display a bitmap image representing the area of the building or floor where the units or groups are physically located
EMAIL	The following information may be sent regularly and automatically via email: energy monitoring data, energy saving data, trend logging data (temperatures etc) and fault code history

*NOTE 1: Applicable with G50 / PAC-SC50KUA or AG150 / PAC-SC51KUA or GB50 / PAC-SC50KUA
NOTE 2: Energy Meters not supplied by MEUK

TG2000 Software with Third Party Equipment

PC Based Software Package

The TG2000 centralised PC based graphical software package allows the operator to control and monitor up to a maximum of 2000 indoor units. This software has been designed to connect directly to an air conditioning system via G50/GB50 controller; allowing the operator all the required functionality to control and monitor the complete air conditioning system from a central location. In addition to providing a centralised control facility, the TG2000 allows you to monitor and control third party equipment.



Technical Information

TG2000 Software with Third Party Equipment

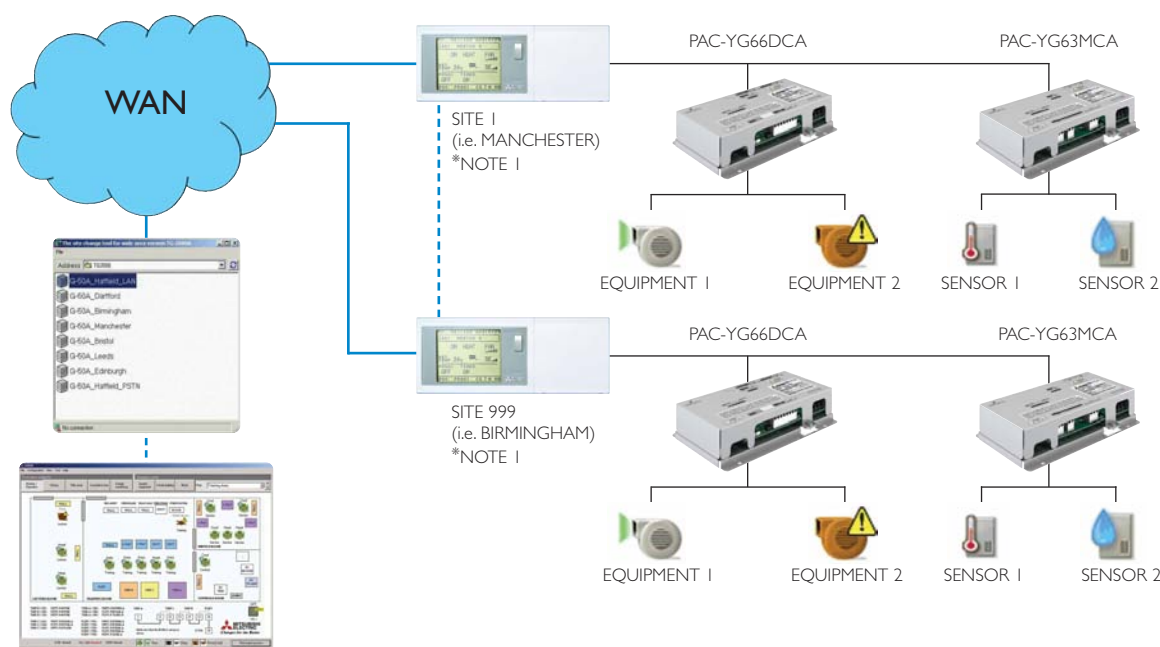
FUNCTION	DESCRIPTION
OPERATING PLATFORM	Pentium III, CPU 1000 Mhz, 256 MB RAM, 6GB or more. Internal LAN 10/100 MBps running Windows Professional 2000 service pack 4 or Windows Professional XP service pack 2 or Windows Vista
MAX No. OF INDOOR UNITS	2000 Indoor units, 50 indoor units per G50/AG150/GB50
OPERATIONAL SECTIONS	The software package is split into two distinctive areas, System and Controls setting. System Setting: Password protected, System Configuration and group/block organisation, printer setting. Controls Setting: Normal Operation, monitoring and control functions as described below. The software allows individual indoor units to be allocated to logical groups, represented within user definable graphics screens, allocated during the system configuration
ON/OFF	Indicates the On/Off status of each group within the selected graphical screen or entire building
OPERATION MODE	Indicates the operational mode (Cool, Heat, Fan, Dry, Auto) for each group on the selected graphical screen
SET TEMPERATURE	Displays the set temperature for each group on the selected graphical screen. Also able to limit the set point range in both heating and cooling mode
AIR SPEED	Displays the current fan speed setting for each group on the selected graphical screen
REMOTE CONTROLLER PROHIBIT/PERMIT	Displays the current prohibit/permit status for each groups remote controller on the selected graphical screen
ABNORMALITY (FAULT) MONITORING	Individual indoor unit fault monitoring is recorded within the fault log for both viewing and printing. Fault monitoring can also be viewed via the fault log for all units associated with a particular graphical screen or the entire building. Faults can also be tracked and printed using date of failure, date of recovery and error code
ROOM TEMPERATURE MONITORING	Displays the return air temperature of the master indoor unit within a group
SCHEDULED ON/OFF	On/Off schedules can be set for each group, each graphical screen or the entire building
ENERGY SAVE CONTROL	Individual indoor unit, group of indoor units or a complete system can be controlled. There are various energy saving options available (Optional)
TREND LOGGING	Able to log: Return air temperature, setpoint, mode, On/Off, power consumption by group or by indoor unit, watt-hour meter and then email to customer
GRAPHICAL SCREENS	The complete system configurations can be allocated between multiple screens. Each screen can display a bitmap image representing the area of the building or floor where the units or groups are physically located
THIRD PARTY EQUIPMENT MONITOR	Monitor general equipment Run and Faults via the PAC-YG66DCA interface and Temperature and Humidity via the PAC-YG63MCA
THIRD PARTY EQUIPMENT CONTROL	Control general equipment On/Off via the PAC-YG66DCA
EMAIL	The following information may be sent regularly and automatically via email: energy monitoring data, energy saving data, trend logging data (temperatures etc) and fault code history

*NOTE 1: Applicable with G50 / PAC-SC50KUA or AG150 / PAC-SC51KUA or GB50 / PAC-SC50KUA
NOTE 2: Temperature and Humidity Sensors not supplied by MEUK

TG2000 WAN (Wide Area Network) Software

PC Based Software Package used to monitor and control multiple sites

The TG2000 WAN centralised PC based graphical software package allows the operator to control and monitor up to a maximum of 1000 sites. Utilising the companies Wide Area Network, the complete (geographically distributed) air conditioning asset base can be controlled and monitored from a centralised location.



Technical Information

TG2000WAN (Wide Area Network) Software

FUNCTION	DESCRIPTION
OPERATING PLATFORM	Pentium III, CPU 1000 Mhz, 256 MB RAM, 6GB or more. Internal LAN 10/100 MBps running Windows Professional 2000 service pack 4 or Windows Professional XP service pack 2 or Windows Vista
MAX No. OF SITES	1000
MAX No. OF INDOOR UNITS PER SITE	2000 Indoor units, 50 indoor units per G50/AG150/GB50 (per site)
OPERATIONAL SECTIONS	The software package is split into two distinctive areas, System and Controls setting. System Setting: Password protected, System Configuration and group/block organisation, printer setting. Controls Setting: Normal Operation, monitoring and control functions as described below. The software allows individual indoor units to be allocated to logical groups, represented within user definable graphics screens, allocated during the system configuration
ON/OFF	Indicates the On/Off status of each group within the selected graphical screen or entire building
OPERATION MODE	Indicates the operational mode (Cool, Heat, Fan, Dry, Auto) for each group on the selected graphical screen
SET TEMPERATURE	Displays the set temperature for each group on the selected graphical screen. Also able to limit the set point range in both heating and cooling mode
AIR SPEED	Displays the current fan speed setting for each group on the selected graphical screen
REMOTE CONTROLLER PROHIBIT/PERMIT	Displays the current prohibit/permit status for each groups remote controller on the selected graphical screen
ABNORMALITY (FAULT) MONITORING	Individual indoor unit fault monitoring is recorded within the fault log for both viewing and printing. Fault monitoring can also be viewed via the fault log for all units associated with a particular graphical screen or the entire building. Faults can also be tracked and printed using date of failure, date of recovery and error code
ROOM TEMPERATURE MONITORING	Displays the return air temperature of the master indoor unit within a group
SCHEDULED ON/OFF	On/Off schedules can be set for each group, each graphical screen or the entire building
GRAPHICAL SCREENS	The complete system configurations can be allocated between multiple screens. Each screen can display a bitmap image representing the area of the building or floor where the units or groups are physically located
THIRD PARTY EQUIPMENT MONITORING	Monitor general equipment Run and Faults via the PAC-YG66DCA interface and Temperature and Humidity via the PAC-YG63MCA
THIRD PARTY EQUIPMENT CONTROL	Control general equipment On/Off via the PAC-YG66DCA
EMAIL	The following information may be sent regularly and automatically via email: energy monitoring data, energy saving data, trend logging data (temperatures etc) and fault code history

*NOTE 1: Applicable with G50 / PAC-SC50KUA or AG150 / PAC-SC51KUA or GB50 / PAC-SC50KUA

NOTE 2: The TG2000 WAN cannot be utilised if the following site functions are required: energy charging, energy saving and trend logging.

NOTE 3: Temperature and Humidity Sensors not supplied by MEUK

TG2000 Screenshots

Display Whole



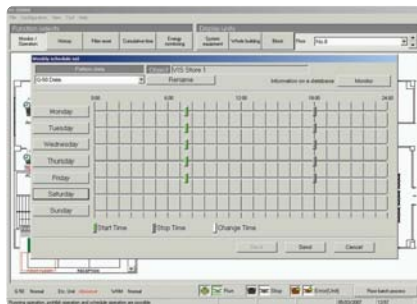
The 2000 indoor units status may be shown on one screen.

Display Floor



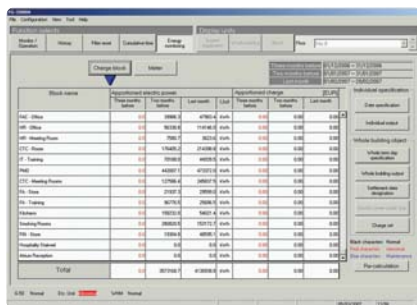
AutoCAD drawing may be imported to TG2000 to display floor screens.

Daily, Weekly and Annual Scheduling (AS PIN code)



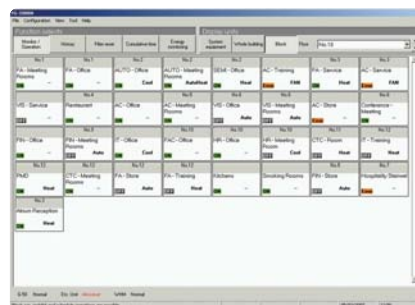
Scheduling may be set from the TG2000. A night set back operation is available (HEAT, 12°C). Optional on the G50, standard with the GB50.

Energy Monitoring (EC PIN code)



TG2000 in conjunction with energy meters can monitor the energy consumption for each outdoor unit, indoor unit or area. The indoor unit run hours can also be displayed.

Display Block



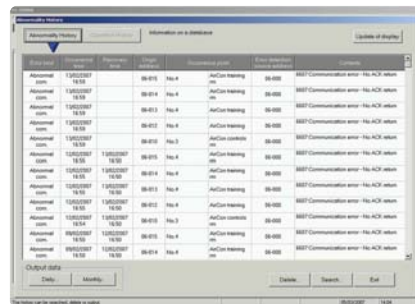
Block may be set for each area. Settings may be changed by one click of the mouse for each area.

Remote Controller Settings



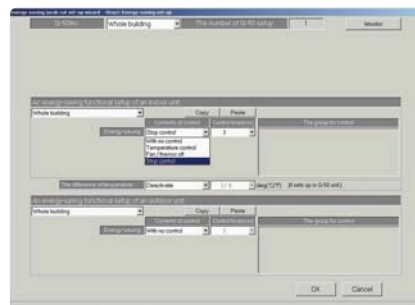
Click on any icons in the floor view to access the remote controller settings. Buttons on the local controllers may be locked (On/Off, Mode, Setpoint, Filter reset).

Monitor Fault Codes



Faults with the unit address can be displayed under fault conditions.

Energy Saving (ES PIN code)



TG2000 offers different energy saving options including load shedding.

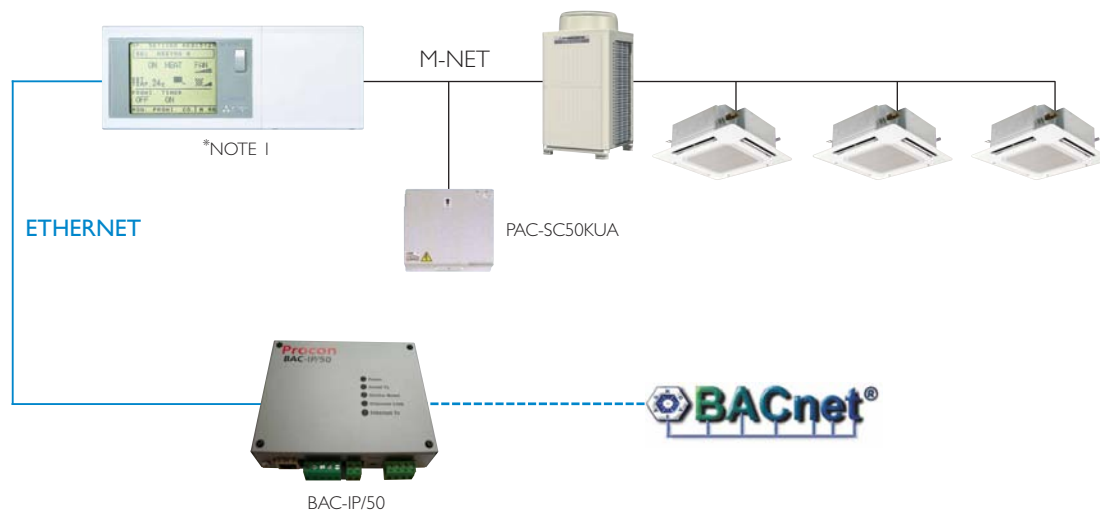
New icons now available to suit model type installed



BEMS BACnet® Interface

Procon™ BAC-IP/50

To further enhance our complete open system network offering, we offer a BACnet® gateway solution. Utilising the ASHRAE BACnet® standard, complete control and monitoring integration can be achieved with up to 50 air conditioning units.



Technical Information

BACnet® INTERFACE

FUNCTION	BAC-IP/50	COMPATIBLE WITH
MAX No. OF INDOOR UNITS	50	Andover Controls
COMPATIBILITY	City Multi Mr Slim via PAC-SF80MA M Series via MAC-399IF	York BMS
DIMENSIONS - mm (WxDxH)	144x34x104	Siemens
		Priva Building Intelligence
		Delta Controls

BACnet® INTERFACE

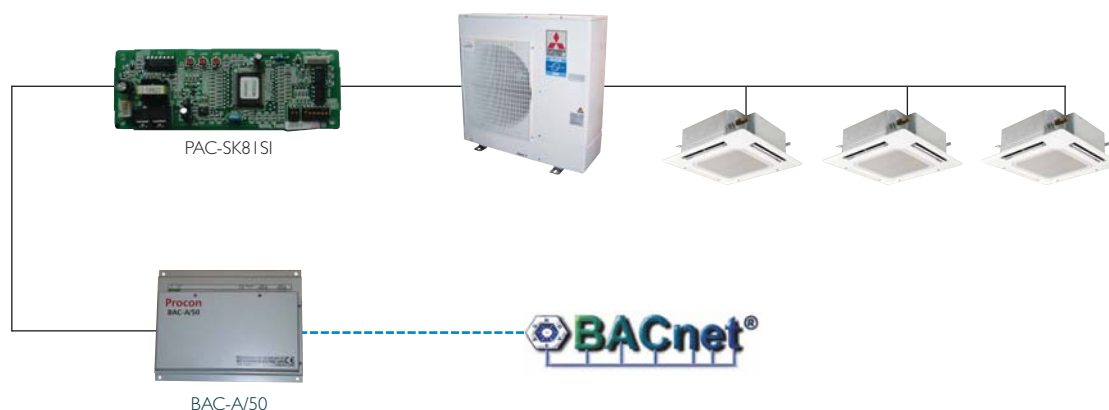
FUNCTION	NETWORK VARIABLE	NOTES
Control		
	On/Off	Run/Stop
	Mode Operation	Cool / Dry / Heat / Auto / Fan
	Setpoint Adjustment	Cooling 19-30°C, Heating 17-28°C, Auto 19-28°C
	Fan Speed Control	Lo-Mi1-Mi2-Hi
	Permit / Prohibit	On/Off, Mode, Setpoint
	Airflow Direction	Horizontal - 60,80,100° swing
	Filter Sign	Normal/Reset
Monitor		
	On/Off	Run/Stop
	Mode Operation	Cool / Dry / Heat / Auto / Fan
	Setpoint Adjustment	Cooling 19-30°C, Heating 17-28°C, Auto 19-28°C
	Fan Speed Control	Lo-Mi1-Mi2-Hi
	Permit / Prohibit	On/Off, Mode, Setpoint
	Airflow Direction	Horizontal - 60,80,100° swing
	Fault Code	4 Character code - Indicates all unit alarms
	Filter Sign	-
	Room Temperature	-

*NOTE 1: Applicable with G50 / PAC-SC50KUA or AG150 / PAC-SC51KUA or GB50 / PAC-SC50KUA

BEMS BACnet® Mr Slim Interface

Procon™ BAC-A/50

A new BACnet® Interface has been specially developed for the Mr Slim systems. The BAC-A/50 can control up to 50 individual systems.



Technical Information

BACnet® MR SLIM INTERFACE

FUNCTION	BAC-A/50	COMPATIBLE WITH
MAX No. OF OUTDOOR UNITS	50	Andover Controls
COMPATIBILITY	Mr Slim via PAC-SK8 ISI	York BMS
		Siemens
		Priva Building Intelligence
DIMENSIONS - mm (WxDxH)	270x75x210	Delta Controls

BACnet® MR SLIM INTERFACE

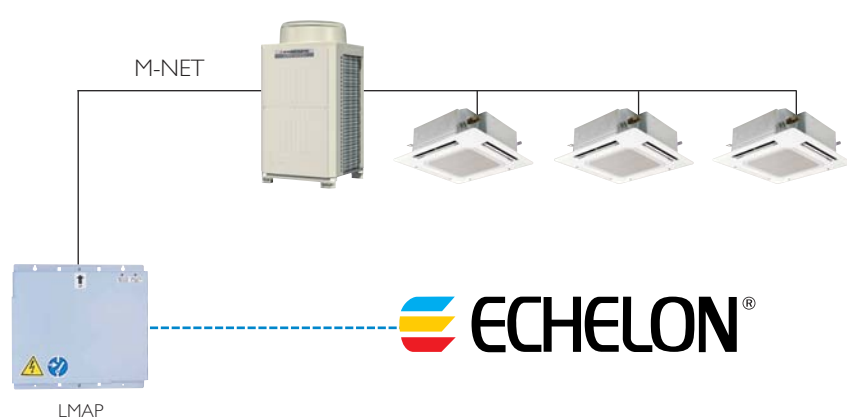
FUNCTION	NETWORK VARIABLE	NOTES
Control		
	On/Off	Run/Stop
	Mode Operation	Cool / Dry / Heat / Auto / Fan
	Setpoint Adjustment	Cooling 19-30°C, Heating 17-28°C, Auto 19-28°C
	Fan Speed Control	Lo-Mi1-Mi2-Hi
	Permit / Prohibit	On/Off, Mode, Setpoint
	Airflow Direction	Horizontal - 60,80,100° swing
	Filter Sign	Normal/Reset
Monitor		
	On/Off	Run/Stop
	Mode Operation	Cool / Dry / Heat / Auto / Fan
	Setpoint Adjustment	Cooling 19-30°C, Heating 17-28°C, Auto 19-28°C
	Fan Speed Control	Lo-Mi1-Mi2-Hi
	Permit / Prohibit	On/Off, Mode, Setpoint
	Airflow Direction	Horizontal - 60,80,100° swing
	Fault Code	4 Character code - Indicates all unit alarms
	Filter Sign	-
	Room Temperature	-

BEMS LonWorks® Interface

LMAP

The Mitsubishi Electric LMAP continues to strengthen the ability of our products to interface with other third party building control systems using the globally recognised and accepted open network protocol Echelon LonWorks®. LonWorks® was introduced into the building services industry a number of years ago with the aim of establishing itself as the defacto communications standard. Many hundreds of products now exist that utilise the LonWorks® protocol from complete systems like BEMS, lighting, power monitoring and security down to simple sensors and relay switches.

To ensure that our products can connect directly and easily with other LonWorks® products, the L-MAP02 was designed utilising Echelon MIPS technology and was the first to provide data in the LonWorks® SNVT (Standard Network Variable Type) format.



Technical Information

LMAP LonWorks® INTERFACE

FUNCTION	LMAP	COMPATIBLE WITH
MAX No. OF INDOOR UNITS	50 (G50/AG150/GB50 optional)	Honeywell Johnson Controls Realtime Control Systems (LTX51/LTX21 via VCI) Smart Controls
COMPATIBILITY	City Multi Mr Slim via PAC-SF80MA M Series via MAC-399IF	
DIMENSIONS - mm (WxDxH)	340x60x360	

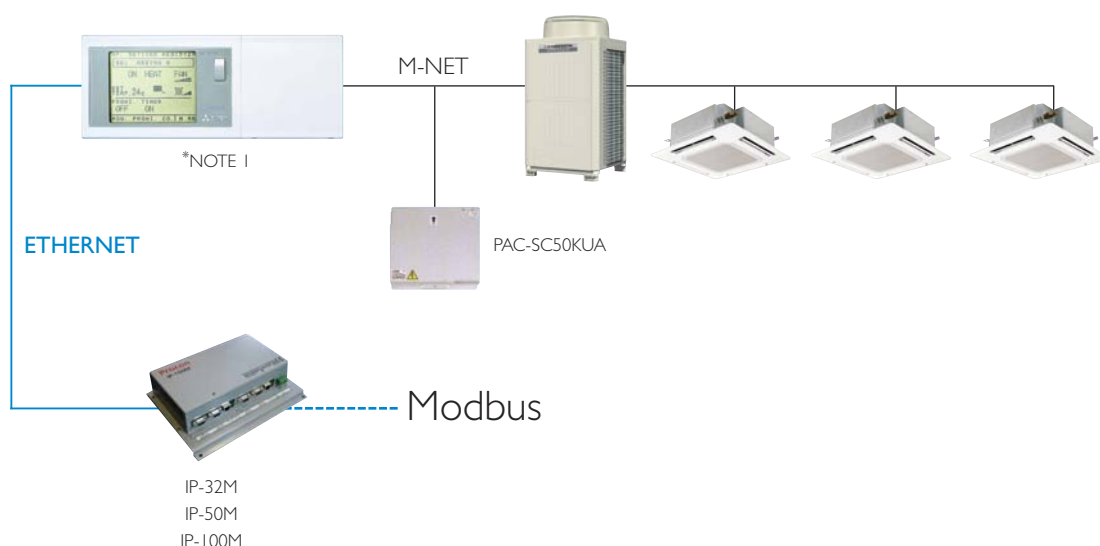
LMAP LonWorks® INTERFACE

FUNCTION	NETWORK VARIABLE	NOTES
Control		
	On/Off	Run/Stop
	Mode Operation	Cool / Dry / Heat / Auto / Fan
	Setpoint Adjustment	Cooling 19-30°C, Heating 17-28°C, Auto 19-28°C
	Fan Speed Control	Lo-Mi1-Mi2-Hi
	Permit / Prohibit	On/Off, Mode, Setpoint (only available when using PAC-YT51CRA or PAR-21MAA)
	Filter Sign	Normal/Reset
Monitor		
	On/Off	Run/Stop
	Mode Operation	Cool / Dry / Heat / Auto / Fan
	Setpoint Adjustment	Cooling 19-30°C, Heating 17-28°C, Auto 19-28°C
	Fan Speed Control	Lo-Mi1-Mi2-Hi
	Permit / Prohibit	On/Off, Mode, Setpoint (only available when using PAC-YT51CRA or PAR-21MAA)
	Fault Code	4 Character code - Indicates all unit alarms
	Filter Sign	-
	Room Temperature	-

BEMS Modbus Interfaces

Procon™ IP-32M / IP-50M / IP-100M

To further compliment the existing control and interface product ranges being offered by Mitsubishi Electric to support their air conditioning systems, the Modbus range has been developed to accommodate the typical end-user needs as experienced within the UK market.



Technical Information

MODBUS INTERFACES

FUNCTION	IP-32M	IP-50M	IP-100M	COMPATIBLE WITH
MAX No. OF INDOOR UNITS	32	50	100	Trend via Synapsys SXNC200 Cylon Satchwell Crestron (Home automation) Invensys Interactive Homes North BT Andover Siemens
COMPATIBILITY	City Multi Mr Slim via PAC-SF80MA M Series via MAC-399IF	City Multi Mr Slim via PAC-SF80MA M Series via MAC-399IF	City Multi Mr Slim via PAC-SF80MA M Series via MAC-399IF	
DIMENSIONS - mm (WxDxH)	270x75x210	270x75x210	270x75x210	

MODBUS INTERFACE UNITS - OPERATIONAL INFORMATION

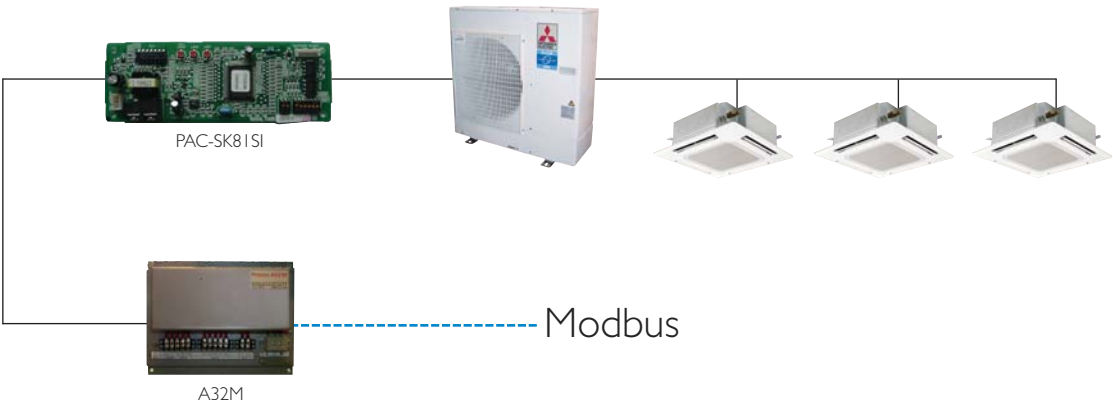
FUNCTION	NETWORK VARIABLE	MODBUS
Control		
	On/Off	Run/Stop
	Mode Operation	Cool / Dry / Heat / Auto / Fan
	Setpoint Adjustment	Cooling 19-30°C Heating 17-28°C Auto 19-28°C
	Fan Speed Control	Lo-Mi1-Mi2-Hi
Monitor		
	On/Off	Run/Stop
	Mode Operation	Cool / Dry / Heat / Auto / Fan
	Setpoint Adjustment	Cooling 19-30°C Heating 17-28°C Auto 19-28°C
	Fan Speed Control	Lo-Mi1-Mi2-Hi
	Fault Code	4 Character code – Indicates all unit alarms
	Room Temperature	-

*NOTE 1: Applicable with G50 / PAC-SC50KUA or AG150 / PAC-SC51KUA or GB50 / PAC-SC50KUA

BEMS Modbus Mr Slim Interface

Procon™ A32M

To further compliment the existing control and interface product ranges being offered by Mitsubishi Electric to support their air conditioning systems, the Modbus range has been developed to accommodate the typical end-user needs as experienced within the UK market.



Technical Information

MODBUS MR SLIM INTERFACE

FUNCTION	A32M	COMPATIBLE WITH
MAX No. OF OUTDOOR UNITS	32	Trend via Synapsys SXNC200 Cylon Satchwell
COMPATIBILITY	Mr Slim via PAC-SK81SI	Crestron (Home automation) Invensys Interactive Homes
DIMENSIONS - mm (WxDxH)	270x75x210	North BT Andover Siemens

MODBUS MR SLIM INTERFACE - OPERATIONAL INFORMATION

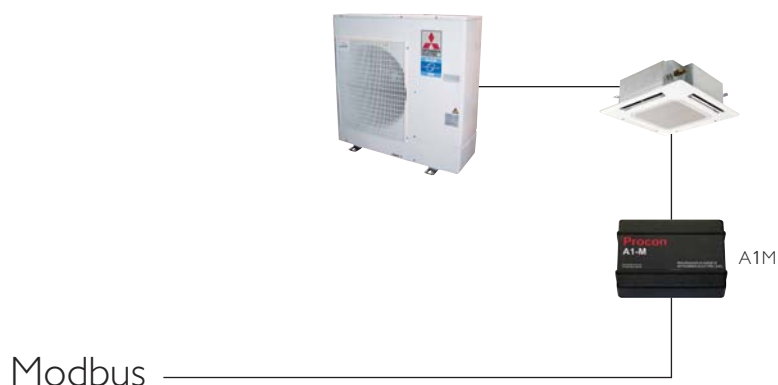
FUNCTION	NETWORK VARIABLE	MODBUS
Control		
	On/Off	Run/Stop
	Mode Operation	Cool / Dry / Heat / Auto / Fan
	Setpoint Adjustment	Cooling 19-30°C Heating 17-28°C Auto 19-28°C
	Fan Speed Control	Lo-Mi1-Mi2-Hi
Monitor		
	On/Off	Run/Stop
	Mode Operation	Cool / Dry / Heat / Auto / Fan
	Setpoint Adjustment	Cooling 19-30°C Heating 17-28°C Auto 19-28°C
	Fan Speed Control	Lo-Mi1-Mi2-Hi
	Fault Code	4 Character code – Indicates all unit alarms
	Room Temperature	-

NOTE: Not available on SEZ / SLZ

BEMS Modbus Splits Interface

Procon™ A1M

To further compliment the existing control and interface product ranges being offered by Mitsubishi Electric to support their air conditioning systems, the Modbus range has been developed to accommodate the typical end-user needs as experienced within the UK market.



Technical Information

MODBUS SPLITS INTERFACE

FUNCTION	A1M	COMPATIBLE WITH
MAX No. OF INDOOR UNITS	1	Trend via Synapsys SXNC200 Cylon Satchwell
COMPATIBILITY	M Series Mr Slim	Crestron (Home automation) Invensys Interactive Homes
DIMENSIONS - mm (WxDxH)	72x27x50	North BT Andover Siemens

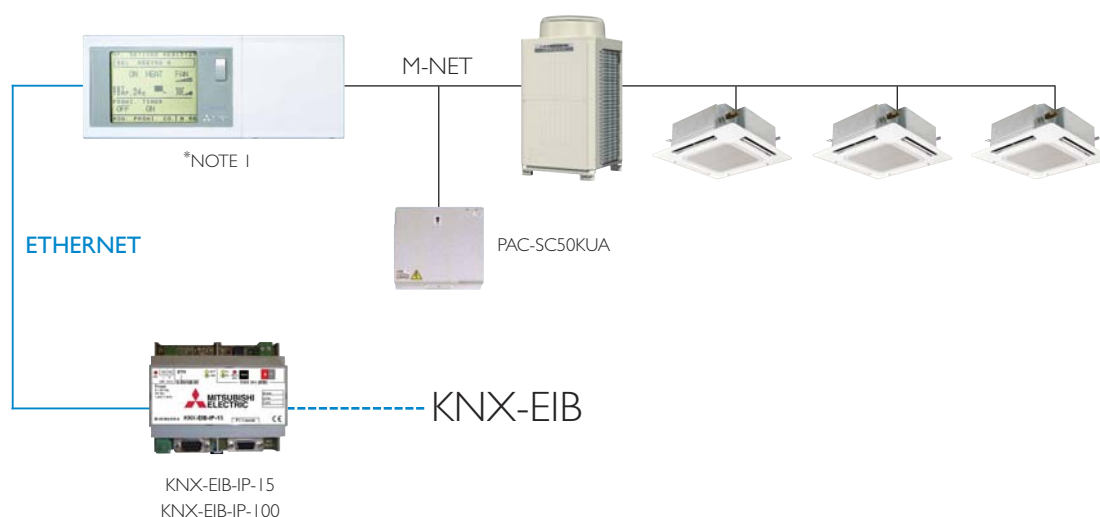
MODBUS SPLITS INTERFACE - OPERATIONAL INFORMATION

FUNCTION	NETWORK VARIABLE	MODBUS
Control		
	On/Off	Run/Stop
	Mode Operation	Cool / Dry / Heat / Auto / Fan
	Setpoint Adjustment	Cooling 19-30°C Heating 17-28°C Auto 19-28°C
	Fan Speed Control	Lo-Mi1-Mi2-Hi
Monitor		
	On/Off	Run/Stop
	Mode Operation	Cool / Dry / Heat / Auto / Fan
	Setpoint Adjustment	Cooling 19-30°C Heating 17-28°C Auto 19-28°C
	Fan Speed Control	Lo-Mi1-Mi2-Hi
	Fault Code	4 Character code – Indicates all unit alarms
	Room Temperature	-

BEMS KNX-EIB Interfaces

Procon™ KNX-EIB-IP-15/100

To further compliment the existing control and interface product ranges being offered by Mitsubishi Electric to support their air conditioning systems, the KNX-EIB range has been developed to accommodate the typical end-user needs as experienced within the UK market.



Technical Information

KNX-EIB CITY MULTI INTERFACES

FUNCTION	KNX-EIB-IP-15	KNX-EIB-IP-100	COMPATIBLE WITH
MAX No. OF INDOOR UNITS	15	100	ABB Intelligent Buildings Nova Controls Ltd Siemens
COMPATIBILITY	City Multi Mr Slim via PAC-SF80MA M Series via MAC-399IF	City Multi Mr Slim via PAC-SF80MA M Series via MAC-399IF	
DIMENSIONS - mm (WxDxH)	107x58x105	107x58x105	

KNX-EIB CITY MULTI INTERFACE UNITS - OPERATIONAL INFORMATION

FUNCTION	NETWORK VARIABLE	MODBUS
Control		
	On/Off	Run/Stop
	Mode Operation	Cool / Dry / Heat / Auto / Fan
	Setpoint Adjustment	Cooling 19-30°C Heating 17-28°C Auto 19-28°C
	Fan Speed Control	Lo-Mi1-Mi2-Hi
Monitor		
	On/Off	Run/Stop
	Mode Operation	Cool / Dry / Heat / Auto / Fan
	Setpoint Adjustment	Cooling 19-30°C Heating 17-28°C Auto 19-28°C
	Fan Speed Control	Lo-Mi1-Mi2-Hi
	Fault Code	4 Character code – Indicates all unit alarms
	Room Temperature	-

*NOTE 1: Applicable with G50 / PAC-SC50KUA or AG150 / PAC-SC51KUA or GB50 / PAC-SC50KUA

BEMS KNX-EIB Splits Interface

Procon™ KNX-EIB-A-1

To further compliment the existing control and interface product ranges being offered by Mitsubishi Electric to support their air conditioning systems, the KNX-EIB range has been developed to accommodate the typical end-user needs as experienced within the UK market.



Technical Information

KNX-EIB SPLITS INTERFACE

FUNCTION	KNX-EIB-A-1	COMPATIBLE WITH
MAX No. OF INDOOR UNITS	1	ABB Intelligent Buildings Nova Controls Ltd Siemens
COMPATIBILITY	M Series Mr Slim	
DIMENSIONS - mm (WxDxH)	60x25x48	

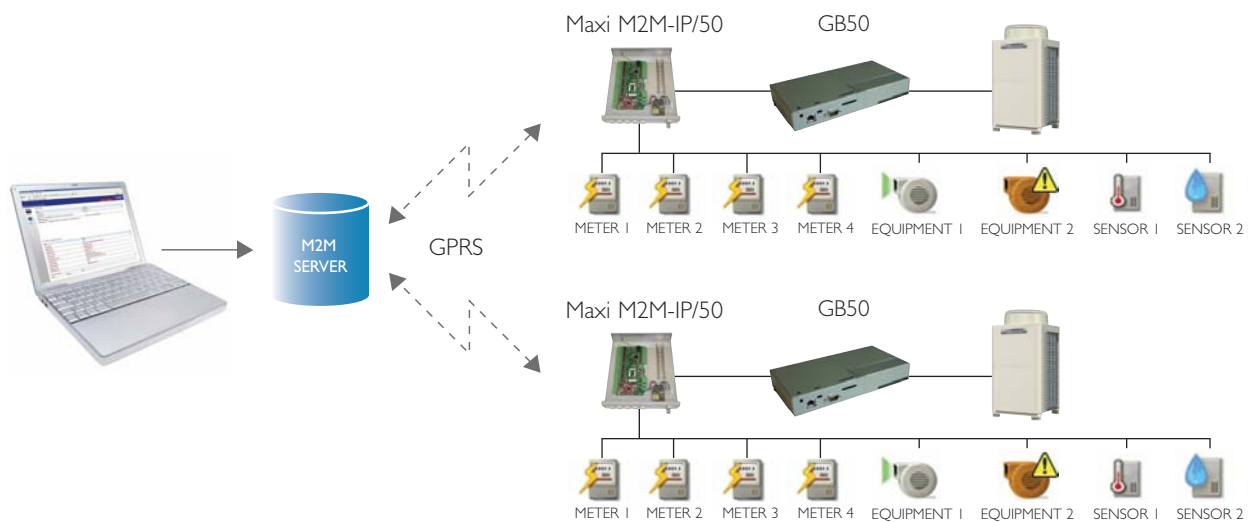
KNX-EIB SPLITS INTERFACE - OPERATIONAL INFORMATION

FUNCTION	NETWORK VARIABLE	MODBUS
Control		
	On/Off	Run/Stop
	Mode Operation	Cool / Dry / Heat / Auto / Fan
	Setpoint Adjustment	Cooling 19-30°C Heating 17-28°C Auto 19-28°C
	Fan Speed Control	Lo-Mi1-Mi2-Hi
Monitor		
	On/Off	Run/Stop
	Mode Operation	Cool / Dry / Heat / Auto / Fan
	Setpoint Adjustment	Cooling 19-30°C Heating 17-28°C Auto 19-28°C
	Fan Speed Control	Lo-Mi1-Mi2-Hi
	Fault Code	4 Character code – Indicates all unit alarms
	Room Temperature	-

M2M - Machine 2 Machine Interface

Procon™ Maxi M2M-IP/50

To offer remote management of its air conditioning units to companies with large numbers of dispersed offices, Mitsubishi Electric has adopted the M2M platform. The machine-to-machine (M2M) technology platform allows customers to integrate multiple sites into one network. The air conditioning units as well as third party equipment will be wirelessly connected to the M2M server and use the GPRS network to communicate.



Technical Information

M2M INTERFACE

FUNCTION	DESCRIPTION
MAX No. OF INPUTS	22 (4 to 20mA, 0 to 10VDC, 10kΩ resistor, digital)
MAX No. OF OUTPUTS	4 (volt free contact) 4 (pulse with modulation)
MAX No. OF INDOOR UNITS	50
COMPATIBILITY	City Multi, Mr Slim and M Series
DIMENSIONS - mm (WxDxH)	300x70x350

M2M INTERFACE - OPERATIONAL INFORMATION

FUNCTION	NETWORK VARIABLE	UP TO 25 GROUPS	UP TO 50 GROUPS	NOTES
Control				
	On/Off	✓	✓	Run/Stop
	Mode Operation	✓	✓	Cool / Dry / Heat / Auto / Fan
	Setpoint Adjustment	✓	✓	Cooling 19-30°C, Heating 17-28°C, Auto 19-28°C
	Fan Speed Control	✓		Lo-Mid-Mid-Hi
	Permit / Prohibit	✓		On/Off, Mode, Setpoint
	Airflow Direction	✓		Horizontal - 60,80,100° swing
	Filter Sign	✓		Normal/Reset
Monitor				
	On/Off	✓	✓	Run/Stop
	Mode Operation	✓	✓	Cool / Dry / Heat / Auto / Fan
	Setpoint Adjustment	✓	✓	Cooling 19-30°C, Heating 17-28°C, Auto 19-28°C
	Fan Speed Control	✓		Lo-Mid-Mid-Hi
	Permit / Prohibit	✓		On/Off, Mode, Setpoint
	Airflow Direction	✓		Horizontal - 60,80,100° swing
	Fault Code	✓	✓	4 Character code - Indicates all unit alarms
	Filter Sign	✓		-
	Room Temperature	✓	✓	-

M2M Software Options - Pin Code Activation

M2M - OS	Optimised Start for Air Conditioning
M2M - ES	Energy Saving Capability

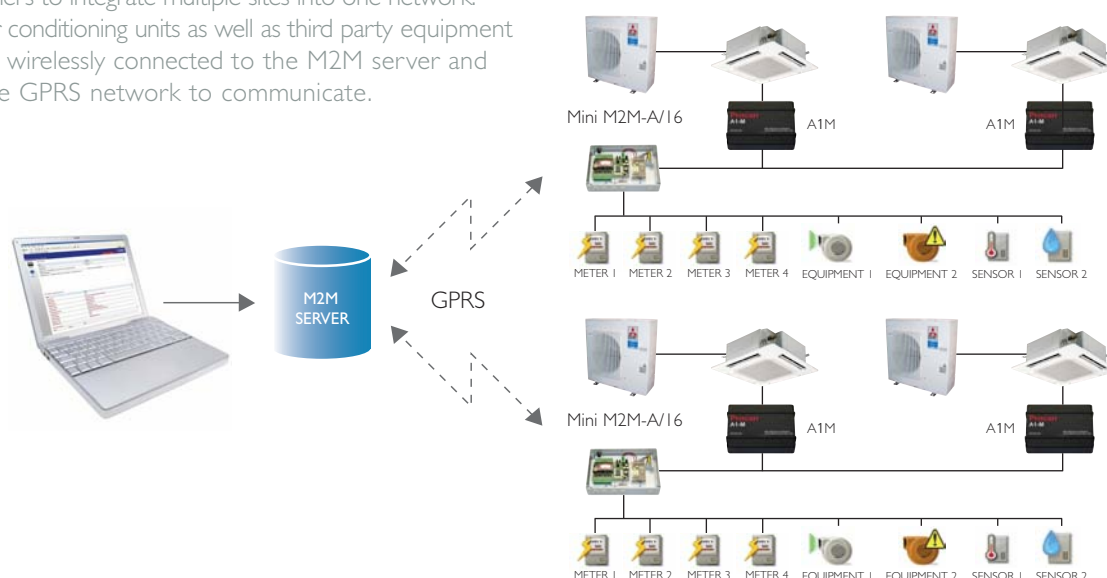
DEMONSTRATION

Visit m2m.mitsubishielectric.co.uk/demo to use the live demonstration space (login: demo / password: demo)

M2M - Machine 2 Machine Splits Interface

Procon™ Mini M2M-A/I 6

To offer remote management of its air conditioning units to companies with large numbers of dispersed offices, Mitsubishi Electric has adopted the M2M platform. The machine-to-machine (M2M) technology platform allows customers to integrate multiple sites into one network. The air conditioning units as well as third party equipment will be wirelessly connected to the M2M server and use the GPRS network to communicate.



Technical Information

M2M SPLITS INTERFACE

FUNCTION	DESCRIPTION
MAX No. OF INPUTS	8 (4 to 20mA, 0 to 10VDC, 10kΩ resistor, digital)
MAX No. OF OUTPUTS	4 (pulse with modulation)
MAX No. OF INDOOR UNITS	16
COMPATIBILITY	Mr Slim and M Series via Procon A1M
DIMENSIONS - mm (WxDxH)	255x60x180

M2M SPLITS INTERFACE - OPERATIONAL INFORMATION

FUNCTION	NETWORK VARIABLE	NOTES
Control		
On/Off	Run/Stop	
Mode Operation	Cool / Dry / Heat / Auto / Fan	
Setpoint Adjustment	Cooling 19-30°C Heating 17-28°C Auto 19-28°C	
Fan Speed Control	Lo-Mi1-Mi2-Hi	
Time Zone	Weekly scheduling available	
Monitor		
On/Off	Run/Stop	
Mode Operation	Cool / Dry / Heat / Auto / Fan	
Setpoint Adjustment	Cooling 19-30°C Heating 17-28°C Auto 19-28°C	
Fan Speed Control	Lo-Mi1-Mi2-Hi	
Fault Code	4 Character code – Indicates all unit alarms	
Room Temperature	-	
Time Zone	Weekly scheduling available	

M2M Software Options - Pin Code Activation

M2M - OS	Optimised Start for Air Conditioning
M2M - ES	Energy Saving Capability

DEMONSTRATION

Visit m2m.mitsubishielectric.co.uk/demo to use the live demonstration space (login: demo / password: demo)

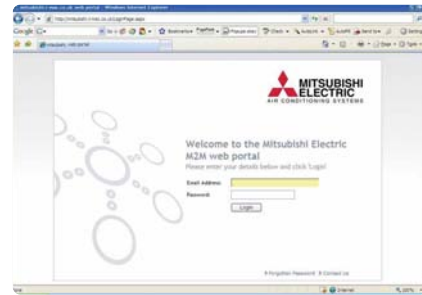
M2M-Machine 2 Machine Web Screenshots

MEUK Website



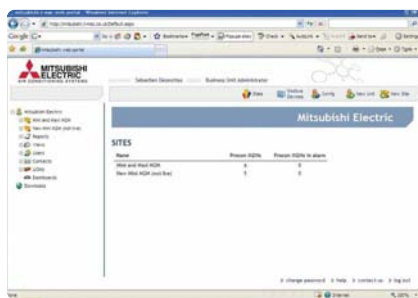
M2M is accessible using MEUK website.

Login



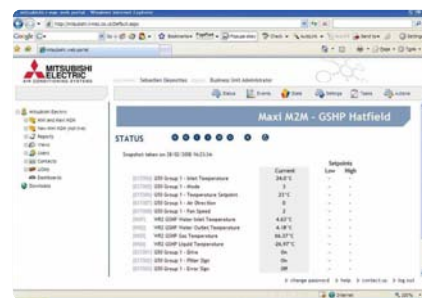
A username and password is required to monitor and control sites.

Monitor Active Alarms and Sites



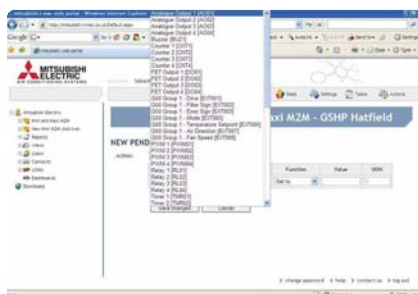
All sites are listed with active alarm sites.

Status



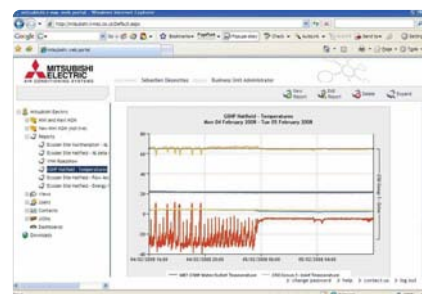
A site can be selected to monitor each system.

Set Parameters



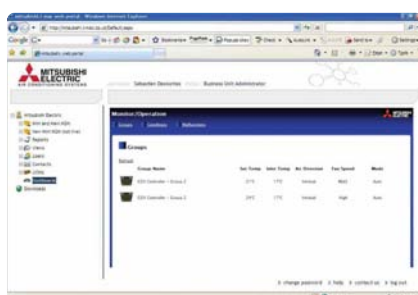
Indoor unit and third party equipment can be controlled from the Website.

Reports



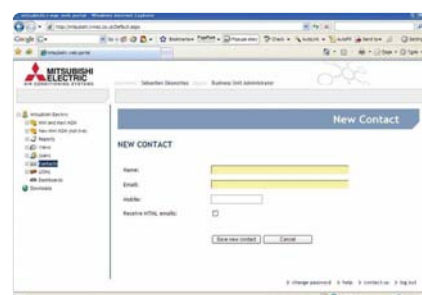
Reports can be generated for analysis.

Dashboard



G50/AG150/GB50 web pages are available for the air conditioning units

Administration



Using the administration level, the phone numbers and email of each duty engineer may be set and activated.

G50 Control Panels

Mitsubishi Electric can supply G50 control panels (surface or internally mounted). This allows easy installation.



G50 Control Panel

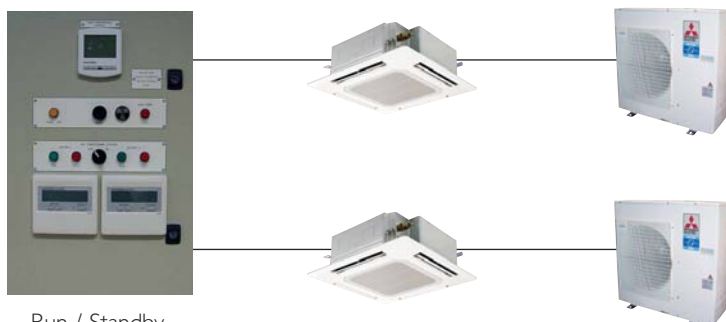
Technical Information

G50 CONTROL PANELS

MODEL	No. OF G50	No. OF INDOOR UNITS	ROUTER	MOUNTED	DIMENSIONS (WxDxH)
GP50PS1	1	50	NO	Surface	600x200x600
GP50PS2	2	100	NO	Surface	600x200x600
GP50PS3	3	150	NO	Surface	800x250x600
GP50PS4	4	200	NO	Surface	800x250x600
GP50PI1	1	50	NO	Internally	600x200x600
GP50PI2	2	100	NO	Internally	600x200x600
GP50PI3	3	150	NO	Internally	800x250x600
GP50PI4	4	200	NO	Internally	800x250x600
GP50PSR1	1	50	YES	Surface	600x200x600
GP50PSR2	2	100	YES	Surface	600x200x600
GP50PSR3	3	150	YES	Surface	800x250x600
GP50PSR4	4	200	YES	Surface	800x250x600
GP50PIR1	1	50	YES	Internally	600x200x600
GP50PIR2	2	100	YES	Internally	600x200x600
GP50PIR3	3	150	YES	Internally	800x250x600
GP50PIR4	4	200	YES	Internally	800x250x600

Run / Standby Control Panels

The run/standby panel allows one system to run one week and the other one to run the other week. If one system fails, the run/standby panel will start the other one. If the temperature is too high, the panel will also start the 2 systems and enable an audible alarm.



Run / Standby
Control Panel

Technical Information

RUN / STANDBY CONTROL PANELS

MODEL	No. OF SYSTEMS	RUN	STANDBY	HIGH TEMP	ALARM	DIMENSIONS (WxDxH)
PANEL_RS1	2	1	1	YES	YES	400x210x600
PANEL_RS2	3	2	1	YES	YES	500x210x700
PANEL_RS3	4	3	1	YES	YES	500x210x700

Energy Monitoring Control Panels

Energy monitoring is key to the compliance with Part L2. To perform energy monitoring; a lot of different products are required. To optimise the time of installation, Mitsubishi Electric can now supply an energy monitoring panel with energy meter; current transformers, breakers and the interface to the Mitsubishi Electric communication network.



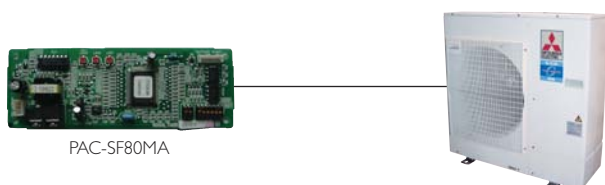
Technical Information

ENERGY MONITORING CONTROL PANELS

FUNCTION	No. OF SYSTEMS	MAX RUNNING CURRENT (A)	DIMENSIONS (WxDxH)
PANEL_EM100A	1	100	600x210x800
PANEL_EM200A	2	200	600x210x800

Split-System A2M Interfaces

The City Multi systems use advanced communication protocol called M-NET. The Split-Systems can be interfaced to M-NET, allowing compatibility with the main centralised controller (G50, AG150, GB50, TG2000). An A2M adapter would be required per outdoor unit for Mr Slim and per indoor unit for Mr Slim S Series or M Series indoor units.



Technical Information

SPLIT-SYSTEM A2M INTERFACES

FUNCTION	PAC-SF80MA	MAC-399IF
COMPATIBILITY	Mr Slim Outdoor Unit	Mr Slim S Series / M Series Indoor Unit
CONNECTION TO	Outdoor Unit	Indoor Unit
MNET SETTINGS	Rotary Switches	Dip Switches
DIMENSIONS - mm (WxDxH)	130x15x90	160x55x70